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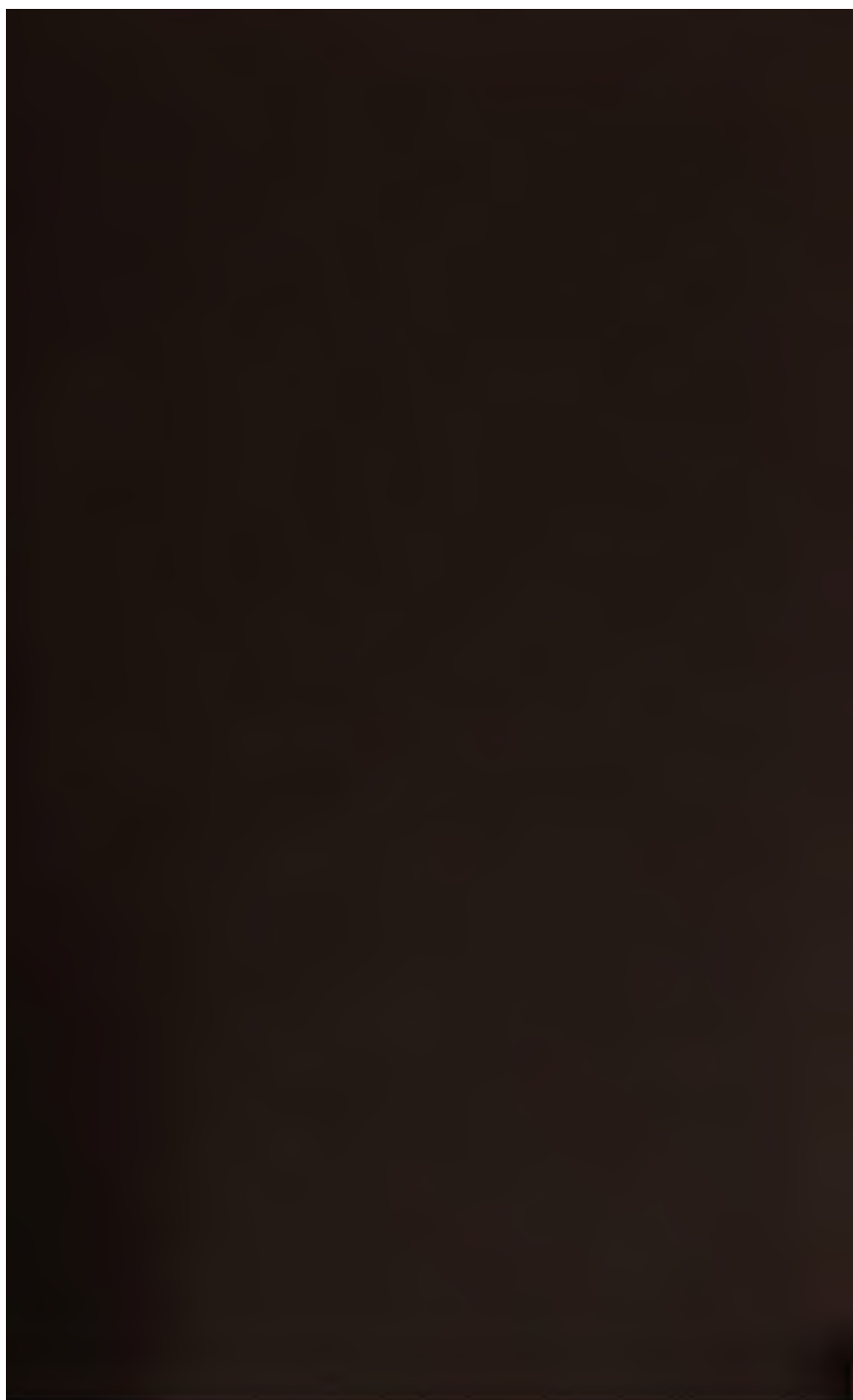
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A. Macules.



B. Papules.



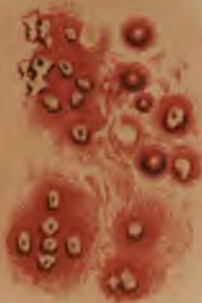
C. Vesicles.



D. Blisters.

PLATE 1. PRIMARY LESIONS OF THE SKIN (See P. 17.)

Hand-colored.



E. Pustules



F. Tubercles



G. Tumors.

PLATE 2. PRIMARY LESIONS OF THE SKIN (See P. 17.)

F. Mearns Lith Phil.

HANDBOOK

T
V

OF THE

DIAGNOSIS AND TREATMENT

OF

SKIN DISEASES

BY

ARTHUR VAN HARLINGEN, M. D.,

PROFESSOR OF DISEASES OF THE SKIN IN THE PHILADELPHIA POLYCLINIC AND COLLEGE
FOR GRADUATES IN MEDICINE; CLINICAL LECTURER ON DERMATOL-
OLOGY IN THE JEFFERSON MEDICAL COLLEGE.

SECOND EDITION, ENLARGED AND REVISED.

WITH EIGHT FULL-PAGE PLATES AND OTHER ILLUSTRATIONS.



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TO
THE MEMORY OF
JOHN MARTIN VAN HARLINGEN,
THIS BOOK IS
AFFECTIONATELY DEDICATED,
BY HIS SON,
THE AUTHOR.

PREFACE TO THE SECOND EDITION.

In the present edition, besides rewriting a few of the articles and adding considerably to others, I have introduced a number of new articles, chiefly brief descriptions of the rarer affections. The additions have nearly doubled the quantity of matter, although not the size of the book.

An especial feature of the present edition has been the introduction of a number of illustrations, some original and others taken from special journals and monographs. It is hoped, as it is intended, that these shall be of service in aiding the diagnosis and treatment of the affections described.

118 South Seventeenth St., Jan. 1, 1889.



PREFACE TO THE FIRST EDITION.

In writing this book I have had in mind the wants of the practitioner, and I have tried to make it useful as a work of ready reference. For this reason I have given space to the description, diagnosis and treatment of the various affections of the skin as met with in practice, touching lightly on questions of etiology, and omitting all reference to pathological anatomy. And this, not because I undervalue such knowledge, but because it does not come within the plan of a work not intended for students of dermatology. For the same reason, the commoner affections and those giving most distress and annoyance to the patient have been treated at full length, while the rarer diseases and those causing little trouble have been dealt with briefly. The alphabetical plan of arrangement has also been adopted, with the object of ready reference in view. This renders an index unnecessary ; a full list of contents, however, has been given, which will facilitate the use of the book.

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DISEASES OF THE SKIN.

INTRODUCTION.

Symptomatology. In order to gain a satisfactory conception of the nature of any given skin disease in itself considered, we must have a clear idea of the character and appearance of the individual lesions which go to make up the objective picture known as the eruption. These are of two kinds, primary and secondary.

Primary Lesions of the Skin. These are such as show themselves as the original forms of disease. They are: *macules, papules, vesicles, blebs, pustules, wheals, tubercles* and *tumors*.

Macules are variously sized, shaped and colored portions of altered skin, unaccompanied by elevation or depression. The erythematous syphiloderm is an example of this lesion. (Colored plate, Fig. A.)

Papules are circumscribed, solid elevations of the skin, varying in size from a pin head to a split pea. The papular syphiloderm is a good example of a papular eruption. (Colored plate, Fig. B.)

Vesicles are circumscribed, rounded elevations of the epidermis, varying in size from a pin point to a split pea, containing a clear, serous fluid. The watery pimples seen in herpes zoster are typical examples of vesicles. (Colored plate, Fig. C.)

Blebs are irregularly shaped elevations of the epidermis, varying in size from a split pea to a goose-egg, containing a clear or opaque fluid. The raised watery blisters of pemphigus are blebs. (Colored plate, Fig. D.)

Pustules are circumscribed, rounded elevations of the epidermis, varying in size from a pin point to a finger nail, containing pus. The pimples of acne, when these show a mattery head, are pustules. (Colored plate, Fig. E.)

Wheals are firm, flat, elongated or rounded, slightly raised elevations, which come and go quickly. The lesions of urticaria or "hives" are typical wheals.

Tubercles are firmly seated, solid elevations of the skin, varying in size from a split pea to a cherry. The solid lesions of lupus vulgaris are tubercles. (Colored plate, Fig. F.)

Tumors are variously sized, shaped and constituted, firm or soft prominences. The lesions of molluscum epistuliale are tumors. (Colored plate, Fig. G.)

Secondary Lesions of the Skin. These are such as exist either as the result of primary lesions or from other causes. They are: *crusts, scales, excoriations, fissures, ulcers* and *scars*.

Crusts are effete masses of dried material composed of the products of disease of the skin.

Scales are dry laminated masses of epidermis which have separated from the tissues beneath.

Excoriations are losses of tissue occurring in the superficial layers of the skin.

Fissures are linear wounds having their seat in the epidermis or corium.

Ulcers are irregularly sized and shaped excavations of the cutaneous tissues, the result of disease.

Scars are new formations occupying the place of former normal tissue.

Classification of Diseases of the Skin. The classification of diseases of the skin now most generally employed by dermatologists, is that of the American Dermatological Association. It includes the following eight classes:—

I. **Disorders of the Glands**; (1) of the sweat glands; (2) of the sebaceous glands.

II. **Inflammations.**

III. **Hemorrhages.**

IV. **Hypertrophies**; (1) of pigment; (2) of epidermal and papillary layers; (3) of connective tissue.

V. **Atrophies**; (1) of pigment; (2) of hair; (3) of nail; (4) of cutis.

VI. **New Growths**; (1) of connective tissue; (2) of vessels; (3) of granulation tissue.

VII. **Neuroses.**

VIII. **Parasitic Affections**; (1) vegetable; (2) animal.

DESCRIPTION OF THE VARIOUS
DISEASES OF THE SKIN,
IN ALPHABETICAL ORDER.

Acarus Folliculorum (*ak'-är-ús*), more properly *Demodex Folliculorum*, is a minute, worm-like parasite, not unfrequently found in the sebaceous follicles. It gives rise to no symptoms whatever of disease, but is occasionally pictured in quack advertisements, to frighten the ignorant. The worm-like plugs of altered sebaceous matter which can be expressed from greasy skins, particularly on the face and nose, are occasionally mistaken for parasites, and are popularly called "flesh worms" or "grubs." (See *Comedo*.)

Acne (*äk'-nē*) is an inflammatory, usually chronic, disease of the sebaceous glands, characterized by the formation of papules, tubercles or pustules, or a combination of these lesions, occurring for the most part about the face. It may occur alone or in connection with other affections of the sebaceous glands, as comedo and seborrhœa. The lesions are of various sizes, from a pin's head to a large split pea, and are commonly seen in both the papular and pustular, or the tubercular and pustular forms combined. The lesions are acutely inflammatory, but are not often accompanied by burning, itching, or in fact by any subjective symptoms, excepting occasionally a feeling of soreness when touched. Their color may vary from bright red to dusky or violaceous, with usually a pustular centre. (Colored plate, Fig. E.)

The number of lesions varies greatly in different cases. There may be only one or two, or they may be very numerous. The inflammation may be superficial, or it may be deep, and even occasionally leading to the formation of abscesses. The individual lesions may come and go in a few days, or they may be of slow evolution, but the disease itself is apt in all cases to run a chronic course, the process frequently lasting for years. If there has been much suppuration, more or less unsightly scars may remain.

The chief seat of acne is upon the face, neck, shoulders and chest, although it may occur upon any part of the body except the palms and soles. The severity of the disease varies very greatly. In some instances it may be represented by one or two lesions only, while in others the face, neck, shoulders, chest, and even the whole trunk, may be covered with unsightly papules, pustules, suppurating tubercles, and abscesses.

Acne is one of the commonest diseases of the skin. In this country the statistics of the American Dermatological Association show its occurrence in the practice of specialists to be in the proportion of 9077 cases in 123,746 or 7.34 per cent.* among all diseases of the skin. I am inclined to think this an understatement of the relative frequency of the disease. Many cases go untreated because patients have been assured by the family physician that the disease is incurable, or that it will get well of itself in time, or that it will not do to drive it in, etc.; refuges of ignorance which may satisfy the conscience of the physician, but which entail at times a great amount of shame and humiliation on young persons, particularly women, solicitous of their appearance. Acne occurs in the young of both sexes, appearing

*The statistics of the American Dermatological Association, comprising 123,746 cases carefully collated during the past ten years, first by Dr. James C. White, and later by Dr. James Nevins Hyde, form a most instructive storehouse of knowledge as to the comparative frequency of skin affections in this country. They far surpass in extent and interest any European statistics, besides being of more practical value as occurring in this country. I shall frequently have occasion to refer to them under the designation "American Statistics."

about the age of puberty. It does not often occur in children, and, on the other hand, only rarely makes its appearance for the first time in mature years.

Papular acne is chiefly characterized by the occurrence of papular lesions, of pin-head to small pea size, flat, or more or less pointed, lightish red in color, situated about the sebaceous follicles, and often showing a minute black point, which indicates the mouth of the sebaceous duct. This variety of acne is often accompanied by comedones. (See *Comedo*.) The lesions, though commonly most plentiful over the forehead, are also frequently met on the face and elsewhere. There are usually a few pustular lesions scattered among the papules. The latter are not inflammatory, and papular acne is the least developed form of the disease.

Pustular acne is the typical form of the disease, though even when fully developed pustules form the chief feature of the eruption, many lesions of a papular and intermediate character are found. The pustules are pin-head to large pea-sized, rounded or acuminate, seated on a more or less infiltrated base of superficial or deep inflammatory product. (See colored plate, Fig. E.) Suppuration may be slight or abundant. When the base is deeply infiltrated the affection is known as *acne indurata*. This last form sometimes runs into the production of abscesses, which appear chiefly on the face and down the shoulders and back, forming the most serious and annoying phase of the disease. Indurated acne is apt to result in the formation of cicatrices, of a pitted or atrophic character, which are quite disfiguring. Sometimes keloid occurs as a result of indurated acne, the lumpy scars lasting some months, but finally disappearing spontaneously.

Artificial acne is sometimes observed as the result of the external employment of tar and other substances. The so-called *bromine* and *iodine acne* will be described under another head. (See *Dermatitis*.)

The causes giving rise to acne are numerous and varied in their nature. I know of scarcely any other disease of the skin

of the affection in a case seen for the first time. Severe cases of acne are sometimes taken for variola, but this can hardly occur if a careful examination is made into the general symptoms and history of the eruption. Non-parasitic sycosis also must be distinguished from acne.

DIFFERENTIAL DIAGNOSIS.*

BETWEEN

ACNE.	THE PAPULO-PUSTULAR SYPHILO- DERM.
1. A disease of puberty and of early adult life.	1. A disease of any age, but more usual in adults.
2. Chronic, with exacerbations depending upon menstruation, attacks of dyspepsia, constipation, etc.	2. Acute or sub-acute as a usual thing, unless confined to one or two points.
3. Often inflammatory in character.	3. No sign of acute inflammation.
4. No constitutional symptoms.	4. Symptoms of constitutional syphilis; enlarged post-cervical glands, mucous patches about the tongue and mouth.
5. Eruption usually limited to face and shoulders, or occasionally breast.	5. The eruption usually scattered over the body generally. Apt to be found on sides of face and neck, sometimes in scalp.
6. Sebaceous glands markedly involved, comedones and milia numerous. The skin apt to be greasy.	6. A tendency to scaliness, but no involvement of sebaceous glands.
7. The lesions are usually papules and pustules of uniform size.	7. The marked multiformity of syphilitic lesions is apt to be evident; large and small papules, ulcers, etc.

* This and many of the following schedules of Differential Diagnosis are founded upon those given in the excellent manual of "Differential Diagnosis of the Diseases of the Skin," by Condict W. Cutler, M.S., M.D., New York, G. P. Putnam's Sons, 1887, to which I would refer those desiring a closer study of the subject. I have modified the text here and there in accordance with my personal experience.

ACNE.

8. The pustules are pointed and are covered with thick, smooth, epidermis. They show no crust until after being opened. Are not usually grouped about the *alæ nasi*.

(For further points see the general diagnosis of syphilodermata.)

ACNE.

1. Disease of puberty and early adult life.

2. In its origin usually connected with the changes of puberty. May occur in either sex. Commonly connected with some disturbance of system.

3. Eruption appears on forehead, shoulders, etc.

4. A comedo usually at the centre of the lesion. Hair follicles not affected.

5. Itching or burning absent or very slight.

6. No formation of crusts.

7. Eruption varies in extent, coming and going at different times.

THE PAPULO-PUSTULAR SYPHILODERM.

8. The pustules often become spontaneously crusted, and this crust, if lifted off, shows a small ulcer with a "well" of pus. When only a few lesions are present these are apt to be found about the *alæ nasi*.

SYCOSIS, NON-PARASITICA.

1. Disease of adult life.

2. Only occurs after full establishment of beard and only in males. Cause commonly unknown; not usually connected in any way with general condition of health.

3. Eruption strictly confined to beard and moustache.

4. A hair invariably at the centre of the lesion. The hair bulbs the seat of the disease.

5. Itching and burning commonly present and often excessive.

6. Crusts frequently present.

7. Eruption stationary or steadily progressive.

The treatment of acne is of two sorts, constitutional and local. In order to treat a case of acne with any hope of success, we must first ascertain the causes which have operated in bringing it about. The foundation of the successful treatment of acne lies in the knowledge of its etiology. The patient should be carefully examined regarding every organ and every function. The habits of life, the surroundings, the occupation of the patient, should all be known to the physician, who should also study the case well, to discover, if possible, what is the exact cause or group of causes of which the acne eruption is the expression and result. Without this little can be hoped for, and acne

is one of the minor opprobria of medicine, chiefly because the physician cannot or will not take the trouble to enter into the patient's case with the persevering thoroughness which is indispensable. It should be the aim of the physician to prevent the appearance of the lesions. External treatment will rarely accomplish this, and internal measures must therefore be employed in almost every case. From what has been said under the head of etiology it will be perceived that in general the patient's health must be looked after. If anæmic, tonics are required, among which iron and arsenic are prominent; if the uterine functions are not regularly performed, these must be regulated; if dyspepsia exists this must be combated by diet, regimen and the remedies appropriate to the condition. Constipation is a frequent concomitant with acne, and its removal is necessary to a cure. Acidity of the stomach, flatulence, a coated tongue, are ordinary symptoms, and these, together with irregular and perverted appetite, are constantly met with in connection with the affection under consideration. If constipation exist, saline or vegetable laxatives should be prescribed in sufficient quantity to open the bowels once or twice in the day. An occasional mercurial, as blue pill or a compound cathartic pill, may be prescribed in some cases. The following pill has proved useful in my hands:—

R.	Pil. hydrarg.,		
	Ext. colocynth comp.,	. . . aa . . .	gr. iiss
	Pulv. ipecac,	gr. ss.
	Fiat in pil. No. j.		M.

Two or more of these pills are to be taken at bedtime, followed by a saline, as a wineglass of Hunjadi water in a goblet of plain hot water before breakfast the next morning. They are not, of course, to be taken habitually—perhaps once in five or ten days will be often enough.

The admirable mixture devised by the late Mr. Startin, of London, known as “Mistura ferri acida,” is one of the most valuable aperient tonics which can be given for acne accompanied by constipation.*

* The formula for this mixture is given under Eczema.

The natural mineral waters are used with good success in acne. The Hathorn and Geyser springs of Saratoga, the German Friedrichshall, Hunjadi Janos and Ofener Racoczy, all cathartic, are of use, the dose, of course, varying with the amount of constipation present.

There are many cases of acne, however, which depend upon some general derangement of the system, the scrofulous taint, anæmia, etc., and these must be treated quite differently. Cod-liver oil will in many cases be found a very efficient curative agent, particularly when the lesions are indurated and tend to extensive multiplication over the trunk as well as the face, with the formation of numerous abscesses. The compound syrup of the hypophosphites is likewise of benefit in these cases, as is also the extract of malt, which may be employed in some instances to replace cod-liver oil when this is found to disagree. The bitter and ferruginous tonics are occasionally called for in this class of cases, and the mineral acids are often of value.

The following formula will be found useful in indurated acne with a tendency to the formation of abscesses, occurring in cachectic and scrofulous individuals:—

R. Quinæ sulphat., gr. viij
 Acid. sulphuric. dil., ℥ x
 Ferri sulphat., gr. xxxij
 Magnesii sulphat., ℥ iij
 Tinct. zingiberis, f ℥ ij
 Aquæ ad. f ℥ viij. M.

SIG.—A tablespoonful in a tablespoonful of water, with a teaspoonful of cod-liver oil floating in it, morning and evening. (T. Calcott Fox.)

The following combination of iron with a mineral acid has sometimes proved of value when dyspeptic symptoms with anæmia coexist with the eruption of acne:—

R. Tinct. ferri chlor., aa . . . f ℥ j
 Acid. phosphoric. dil., f ℥ j
 Syrupi limonis, f ℥ ij. M.

SIG.—Teaspoonful in a wineglass of water thrice daily, after meals.

Among tonics arsenic stands first, sometimes appearing to act almost as a specific in anæmic cases. It may be given con-

veniently in the form of Fowler's solution, in two to four minim doses, gradually increased until the limit of tolerance is reached, and then dropped a little below this and continued for a considerable period. The following formula is a favorite with me; it combines the arsenic with iron:—

R. Liq. potassii arsenitis, fʒij
Vini ferri, ad. fʒiv. M.

SIG.—Teaspoonful in water, after meals.

Fowler's solution should never be prescribed alone, to be given in drops. This is an inconvenient and not altogether safe method of administration. Patients cannot be trusted to drop out the medicine with the requisite care; the size of the drop may vary with different bottles; and it is always dangerous to allow a bottle of concentrated and poisonous medicine to go into the hands of unskilled and perhaps careless people. If it is desired to omit the iron, the arsenic may be given in cinnamon water or in plain water, as I often prescribe it. It should not be mixed with syrup of orange, etc., as is sometimes recommended; patients are apt to revolt against the cloying sweetness, and it not unfrequently disagrees. I may say here that iron does not agree with some acne patients. As Dr. Fothergill says, iron does not agree with "bilious" people. Instead of arsenic, mercury may be given. Dr. Taylor prefers the following formula:—

R. Hydrarg. bichloridi, gr. j
Ammoniae muriat., gr. vj
Tinct. cinchonae comp., fʒij
Aquae, fʒj. M.

SIG.—Teaspoonful in a wineglass of water three times a day, an hour after meals.

The dose here is the thirty-second of a grain, which may be increased every ten days until in general one-quarter of a grain is reached. The effect of this treatment begins in about two or three weeks. Of course, it is not to be understood that syphilis is suspected in the cases in which mercury is recommended. It is simply as a tonic alterative. In cases when it may be desired to combine mercury and arsenic, Dr. Taylor recommends "De

Valangin's solution," liquor arsenici chloridi, which can be given in connection with the bichloride of mercury. The dose of this solution is the same as that of Fowler's solution. The sulphur mineral waters, as those of Richfield, Sharon, Avon, and the White Sulphur of Virginia, have a reputation for beneficial influence in acne; but I am inclined to believe that there is nothing specific in the effects of the waters themselves; and whatever good may be effected is gained by the pure air and general tonic effect of the surroundings. The influence of sulphur waters is generally upon the liver and intestines, and thus, indeed, they may be of indirect benefit in acne. Hygiene, in the form of fresh air, exercise, cold bathing, and a sojourn in the country or by the seashore, will now and then effect what medicines may fail to do. It should be added that the seashore life occasionally is found to disagree violently with acne patients, bringing out the eruption in great abundance. Inquiry should be made before sending patients to the seashore, and they should be directed to change at once if the climate should prove unsuitable.

The local treatment of acne is of the highest importance, and especially so with regard to the choice of remedies. There is perhaps no skin disease in which so many local applications have, at one time or another, been recommended. Used with discretion a few will suffice, but the great number of formulæ extant serve only to confuse the practitioner in search of an appropriate topical application. For this reason I shall give only a selection of those ordinarily used, and this shall embrace the preparations which I am accustomed to employ daily in my own practice, and which I can therefore vouch for from extensive personal knowledge of their good effect.

The external treatment of acne may be either soothing or stimulating. In a small number of cases there is much heat, redness and acute inflammation present, and here mild washes and bland ointments, such as those to be given under the treatment of eczema of the face, will best answer. In most cases, however, stimulant applications are called for. When the skin

is rather coarse and sluggish the face may be rubbed and washed every night with the soap known as "*sapo viridis*," an imported soft soap, the use of which was introduced into this country from Germany. It is of the consistency of ointment, and contains a slight excess of caustic potash. The solution of this soap in one-half its weight of alcohol, known as "*spiritus saponis kalinus*," may be used instead of the soap itself, when a milder effect is desired. A small portion of soap or a few drops to half a teaspoonful of the *spiritus saponis* should be rubbed briskly over the affected skin for several minutes. It must be remembered that these are strongly stimulant preparations, and their chief use is to cause absorption when the lesions are sluggish and indurated. They should be washed carefully off after use, and the part covered with powdered starch or a small quantity of cold cream or some other bland ointment. If they make the skin harsh, their use should be suspended or stopped. When the sebaceous gland ducts are unhealthy and plugged up, and when comedones abound, the soapy applications, especially if combined with copious bathing with hot water, loosen and aid in pressing out the plug of inspissated sebum, and in bringing the glands back to a more healthy condition. The watch key or the comedo-extractor may also aid here, in pressing out the comedones present. A still stronger application sometimes employed in these cases is a fifteen-grain solution of caustic potash in water. This may be followed by a stimulant ointment, as the following :
R. Ung. hydrarg. precip. alb., ʒj ; Ung. aquæ rosæ, ʒiij. The oxide or nitrate of mercury ointments may be substituted if a stronger effect is desired. Sulphur and its preparations are among the most valuable remedies in our possession for the treatment of acne in most of its forms. The following may be given as among the most eligible sulphur compounds with which I have had experience :—

R. Sulphuris præcipitat., ʒj
Ung. aquæ rosæ,
Ung. petrolii, aa ʒiv. M.

Camphor may sometimes be added, with advantage :—

R. Sulphuris præcipitat., ℥j
 Pulv. camphoræ, gr. xx
 Ung. aquæ rosæ,
 Ung. petrolii, aa ℥iv. M.

Among lotions containing sulphur the following may be mentioned as being particularly useful :—

R. Sulphuris præcipitat., ℥j
 Pulv. camphoræ, gr. v
 Pulv. tragacanthæ, gr. x
 Aquæ calcis,
 Aquæ rosæ, aa f ℥j. M.

This exercises a markedly astringent effect upon the skin, and may be used in cases where there is a tendency to rosacea.

The solution known as that of "Vlemincx's" comes into play in sluggish and non-inflammatory forms of acne. It is almost caustic, and must be diluted with from two to four times its volume of water at first, until its effect upon the skin of the individual has been ascertained ; it is made as follows :—

R. Calcis vivæ, ℥ss
 Sulphuris sublimat., ℥j
 Aquæ, f ℥x. M.
 Boil down to six ounces and filter.

A mixture of sulphur, ether and alcohol works well in a certain number of cases :—

R. Sulphuris præcipitat, ℥j
 Ætheris, f ℥vj
 Alcoholis, f ℥iiss. M.
 Sig.—Shake well before using.

Among the compounds of sulphur the following are frequently beneficial in the papular and pustular forms of acne :—

R. Potas. sulphureti, ℥j
 Tinct. benzoini, f ℥j
 Glycerinæ, f ℥iiss
 Aquæ rosæ, f ℥iv. M.

Another prescription which is a favorite of mine is the following:—

R. Potassii sulphuret.,
Zinci sulphat., aa $\frac{3}{4}$ ss—ad $\frac{3}{4}$ j
Aque rosæ, f $\frac{3}{4}$ iv. M.

The ingredients are each dissolved in one-half the water, forming clear solutions. They are then mixed, and a white precipitate takes place, which is to be shaken up and allowed to dry on the face.

The following mercurial preparation is of use in papular acne:—

R. Ung. hydrarg., $\frac{3}{4}$ j
Ung. petrolii, $\frac{3}{4}$ iij. M.

In a certain number of cases bichloride of mercury seems to act better than other preparations. A convenient formula is the following:—

R. Hydrarg. bichlor. corros., gr. ss—ad ij
Emuls. amygdalæ amar., f $\frac{3}{4}$ iv
Tinct. benzoini, f $\frac{3}{4}$ ss. M.

Sig.—Apply at night.

The corrosive chloride of mercury constitutes the basis of the majority of the lotions for the toilet and cosmetics sold in the market.

Mercurial and sulphur preparations should not be used simultaneously.

Two preparations highly recommended by competent dermatologists are these:—

R. Chrysarobini, $\frac{3}{4}$ ss
Collodii, f $\frac{3}{4}$ j. M.

Put a brush in the cork and paint on the lesions every evening.

(GEO. H. FOX.)

R. Zinci iodidi, gr. v—xxv
Ung. petrolii, $\frac{3}{4}$ j. M.

(R. W. TAYLOR.)

Indurated and pustular acne may sometimes be benefited by the application to each lesion of solution of the acid nitrate of

mercury, on the end of a sharpened match, followed by bathing with hot water. Puncture with the point of a fine bistoury or with a lance especially designed for this purpose, is a good procedure in indurated acne with a tendency to the formation of abscesses.

Other and severer remedies for acne have been recommended by authors, but I have had little experience with them, and believe that, in this country at least, the severer measures will usually prove too much for the skin, and will be more apt to prove injurious than beneficial.

Whatever plan of treatment is adopted, it is of the utmost importance that it be thoroughly carried out. The physician should, at first especially, see the patient every day or every few days, to ascertain if his directions are being properly followed. As Taylor remarks, much of the discredit which is attributed to physicians in the treatment of acne is due to two causes: first, either that they are not sufficiently careful, precise and emphatic in giving the directions for treatment; or secondly, that the patients only carry out their directions in an imperfect and indifferent manner. Always give the patient to understand that unless he does what the physician directs him to do, to the letter, the latter is not in any way responsible for his cure.

The prognosis of acne should always be guarded. While by no means the desperate and incurable malady which it is sometimes said to be, by pessimistic or incapable practitioners, it yet often offers a stubborn resistance to treatment, and shows a marked tendency to relapse. The most extensively developed cases, moreover, are sometimes more amenable to treatment than those where half a dozen lesions alone represent the disease, and where the patient enjoys apparently good health. The question is, in the long run, one of time only, as a spontaneous cure sooner or later almost invariably occurs. If neglected, however, unsightly and disfiguring scars supervene in severe cases, and our efforts, therefore, should be unremitting to obtain a speedy cure if possible.

Now and then keloid follows as a result of pustular acne. This

condition, though unsightly and disfiguring, disappears spontaneously with the lapse of time, perhaps in three to twelve months. Treatment usually fails to hasten its disappearance, but see on this point under *Keloid*.

Acne Rosacea. Acne rosacea is a chronic, hyperæmic or inflammatory disease of the face, more particularly the nose, characterized by redness, dilatation and enlargement of the blood vessels, hypertrophy and more or less acne. There are two classes of cases, 1. Those in which acne papules and pustules form the most prominent symptoms, while bright red congestion, with some infiltration of the skin, forms the background. 2. Those in which a sort of erythema or flushing is the first symptom, superadded to which occurs in chronic cases an enlarged and varicose condition of the superficial cutaneous veins, with occasionally hypertrophy of the nose.

The first variety is in reality more closely allied to simple acne. It occurs, however, usually in older persons, not often showing itself in women before twenty-five or thirty years of age and in men not until an even more advanced period. While the nose is the chief seat of this form of acne rosacea, it is likewise frequently encountered upon the cheeks and sometimes upon the forehead and chin. While the entire course of the disease may be chronic, it usually proceeds by acute exacerbations or attacks following some digestive, uterine or other derangement. In the second variety hyperæmia, or flushing, is the earliest symptom, intermittent at first and noticeable only after exposure to a close atmosphere or following the use of alcoholic stimulants or a full meal. This hyperæmia is passive, at first; the nose is cold to the touch and sometimes shows slight seborrhœa. Gradually the redness grows more marked and permanent. If now the nose is examined, small, tortuous blood vessels can be seen ramifying in the skin of the affected part. The disease varies in intensity in different cases, from a slight blush to a marked deformity. The face and particularly the nose are the parts usually attacked. The course of this form of the disease is chronic, sometimes extending over years. The process usually goes no further than

the formation of swollen and tortuous blood vessels, with diffuse redness, but sometimes hypertrophy of the connective tissue takes place, with grotesque enlargement and deformity of the nose, which becomes knobby, irregular in shape, and may grow to enormous size.

The causes of acne rosacea are various. It occurs both in men and women, but in the latter does not often tend to go beyond the first stages. In women also the disease is more prone to occur at two periods of life, at early womanhood and at the climacteric period. When occurring in young women, seborrhoea is apt to be present, and the disease appears to be due, in some measure certainly, to dyspepsia, anæmia, chlorosis and menstrual difficulties. Sometimes the first variety occurs during pregnancy without any other sign of ill health and in persons who seem perfectly robust. It usually goes away under treatment, but may return in later life. When it occurs in later life it is apt to be more severe. In men the disease may occur at any period. In early life it is generally due to anæmia and debility, nervous prostration and dyspepsia. In later life the use of spirituous liquors is often the cause, and perhaps nearly as often, dyspepsia in some of its forms. Habitual indulgence in alcoholic or malt liquors gives rise to this condition in various regions of the face.

The diagnosis of the second variety of acne rosacea presents no difficulties. In the first variety, however, where acneform lesions, pustules, sebaceous crusts, etc. predominate, the diagnosis is not always plain.

The tubercular syphiloderm of the nose and face, lupus vulgaris, and l. erythematous and severe forms of eczema are most commonly confounded with acne rosacea. The distinctive symptoms are given below.

DIFFERENTIAL DIAGNOSIS.

BETWEEN

ACNE ROSACEA.

1. Disease lasting for years.
2. Sebaceous glands often involved.
3. Ulceration never takes place.
4. Crusting unusual. When present, sebaceous, or the result of drying pustules. The crusts, when detached, show no pus underneath.
5. The eruption is almost always symmetrical.
6. Pustules and tubercles apt to be small and indistinct.
7. Blood vessels large and conspicuous.
8. Skin more uniformly affected.

ACNE ROSACEA.

1. Papules red, small and not pronounced.
2. Both sides of nose and face usually affected.
3. No ulceration, no crusting, no cicatrices.
4. Disease spreads slowly or not at all.
5. Blood vessels apt to be involved.
6. Acne pustules often present.
7. A disease of puberty and still more of advanced adult life.

THE TUBERCULAR SYPHILODERM.

1. Disease of months' duration.
2. Glands not involved.
3. Ulceration common.
4. Crusting not uncommon. Crusts, when detached, often show a "well" of pus beneath.
5. The eruption very often occurs on one side of the nose or face only.
6. Pustules and tubercles apt to be large and pronounced.
7. Blood vessels not affected.
8. Patches of healthy skin between the lesions.

LUPUS VULGARIS.

1. Papules large, distinct, often yellow or yellowish red, semi-transparent, like apple jelly.
2. Affection unilateral.
3. Ulceration common, with crusting, usually cicatrices in patches of long standing.
4. Disease sometimes spreads rapidly, invading new localities.
5. No dilatation of blood vessels.
6. Tubercles large and distinct.
7. Almost always begins in childhood.

ACNE ROSACEA.

1. Skin soft.
2. Not much scaling.
3. Blood vessels enlarged.
4. Nose usually the seat of disease.
5. Presence of acne pustules.
6. Connective tissue in old cases apt to be hypertrophied.
7. Hypertrophy of sebaceous glands and in some cases large comedones.
8. Usually begins on and about the nose.
9. Progress uniform or with outbreaks of pustules.

ACNE ROSACEA.

1. Limited to face, especially about nose.
2. Lesions usually cold to the touch.
3. Slow in onset and course. May occur at any period. Due to internal rather than external causes.
4. Blood vessels prominent and dilated. Epidermis smooth.
5. Eyelids not attacked.
6. Itching and burning absent, or very slight.
7. Infiltration limited.
8. Presence of acne pustules, etc.

LUPUS ERYTHEMATOSUS.

1. Skin harsh.
2. Lesions, if left undisturbed, are covered with yellowish sebaceous scales.
3. Blood vessels not dilated.
4. Often appears on the cheeks first.
5. No papules or pustules.
6. No hypertrophy of connective tissue.
7. In some forms plugging of sebaceous ducts with inspissated masses of sebum. In others simply an erythema.
8. Often begins in isolated patches on cheek or elsewhere.
9. Apt to spread by erythematous outbreaks extending area of disease.

ERYTHEMATOUS ECZEMA.

1. Apt to occur upon the forehead, neck, etc., in addition to face.
2. Affected skin hot.
3. Apt to be sudden in onset. Much more common in winter and from external irritation.
4. Vessels not affected. Epidermis rough.
5. Eyelids usually attacked.
6. Burning and itching, one or both always present, sometimes intense.
7. Infiltration generalized over considerable areas.
8. Absence of tubercles and pustules.

The treatment of acne rosacea depends upon the stage of the disease and upon its cause in the given case. Constitutional and local remedies are both used. The causes giving rise to the affection should be diligently sought for and removed, when possible. Uterine and menstrual derangements are to be looked after, the stomach and bowels kept in good order, and all hygienic measures used to improve the general health. Alcoholic and malt liquors are to be totally eschewed. Tea and coffee should be drunk in moderation and not strong. Inveterate tea drinkers are very apt to have red noses. Tea is often made to take the place of food, and gradually brings on a sort of dyspepsia peculiar to itself. The food should be of the plainest character. The general medical treatment is that of acne. Local treatment, however, is of the most value. Sulphur lotions, as in acne, may be used in the early stages, the following formula being a useful one:—

R. Sulphuris præcipitat., $\frac{3}{4}$ j-ij
 Ung. aquæ rosæ, $\frac{3}{4}$ j. M.

Sometimes sulphur lotions are more useful. The sulphur and camphor lotion given above under acne will be found an efficient combination.

This may be applied once to several times a day. In one of the most rapid cures of rosacea I ever observed, the patient kept putting on successive layers of the wash every few hours until her face was covered with a thin yellow crust. Sometimes the wash seems to "draw" the skin and gives rise to an uncomfortable sensation. In this case the sulphur ointment mentioned just above may be applied in small quantity after each application of the wash. On the whole, I have gotten more benefit for patients out of this wash than any other, and I count it the best application in acne rosacea. It will not always do good, however, and we are sometimes driven to try other plans of treatment. A wash of corrosive sublimate, of the strength of one-fourth grain to two grains to the ounce of alcohol, or in ointment, sometimes answers well in the first stage of the disease. Neu-

mann and Hebra recommended mercurial plaster spread on cloths. George H. Fox suggests the employment of chrysarobin, as in acne. Of course, this is to be watched, lest the irritative effect of chrysarobin be produced.

In the second variety of acne rosacea, where numerous well-defined blood vessels can be seen coursing under the skin, the treatment must be somewhat different. Scarification in some form here offers the best chance of improving the condition of the skin. The dilated capillaries may be incised with a fine sharp knife, in the hope that adhesive inflammation may result with the effect of closing the caliber of the vessels. The plan which I follow by preference, however, is that of cross-hatching the entire surface involved, not at one sitting, but in a series of operations. The larger vessels, if such are present, may first be slit up, and then with a multiple-blade knife, such as that figured under lupus erythematosus, held like a pen in the hand, a series of parallel cuts are to be made extending to about one-sixteenth of an inch below the surface. These are then crossed by a similar series of cuts at right angles, and in some cases a third series of cuts may be practiced. As the object is not precisely the same as in the similar treatment of lupus, it is not necessary or desirable to hash up the skin by a number of successive incisions at various angles. To prevent cicatrices, it is indeed sometimes better to practice only a single series of parallel cuts at one sitting. It is usually desirable to benumb the surface before operating in this way, especially on timid or nervous persons, and this may be done by means of freezing. A small gauze bag filled with mingled ice and salt will produce the effect desired, but this may be accomplished more readily by the use of a hand-ball atomizer charged with rhigolene.*

* An exceedingly volatile hydrocarbon of the benzole series, boiling at a temperature of less than 80° F. On account of its extreme inflammability, it should not be employed in proximity to a fire or light. That which I use is obtained through Hance Brothers & White, Manufacturing Chemists, of Philadelphia.

The little operation completed, the parts may be bathed with cold water or tightly compressed with absorbent cotton until bleeding has ceased. Cold water compresses are to be applied subsequently, to control the bleeding. After this a bit of dry lint or some simple dressing may be applied for a few hours. So soon as the soreness has passed away, perhaps in a week's time, scarification may be again practiced. A number of scarifications are usually required, the treatment running over a number of months, and requiring patience on the part of both operator and patient. Eventually, however, a greater degree of success is attained by this method than by any other with which I am acquainted. The skin heals over without any scar, or with such minute cicatrices as are hardly worth notice, and a marked amelioration in the appearance of the nose is the result. Of course, there is a strong tendency to relapse. The closure of some capillary channels naturally leads to the dilatation of those collateral, and thus new vessels appear as old ones are obliterated. Sooner or later, however, a marked impression is made, and a fair result may be hoped for, even in severe cases. What the tendency may be toward relapse after several years I cannot say, as I have only practiced the method for the past few years.

The sulphur and tragacanth wash may be employed concurrently with the surgical treatment described; it tends to keep down the preliminary erythema.

Another treatment is painting the affected parts once or twice weekly with a ten- to twenty-grain solution of caustic potassa and following this by an emollient poultice. In cases where there is but little thickening, carbolic acid dissolved in three to four parts of alcohol may be painted on the part every second day. Hardaway recommends electrolysis, using a number thirteen cambric needle inserted into any convenient handle, and connected with the negative pole of a galvanic battery. A sponge electrode is then connected with the positive pole. The needle is inserted sufficiently deep to enter the dilated vessel; so soon as this has been accomplished, the

patient completes the circuit by taking the sponge electrode in his hand. So soon as the electrolytic action has been properly developed, the patient releases the sponge electrode, after which the operator withdraws the needle. Six to eight elements will generally suffice. If the vessel to be operated upon is a long one, several punctures must be made, at suitable intervals of space. The needle may be inserted perpendicularly or in a line with the course of the vessel. In those rare and severe cases where knobby and gross deformity of the nose exists, decortication with the knife is the only remedy.

The prognosis of the first variety, at least in the early stages, is favorable, and there are few affections of the face in which more striking and rapid results can be attained, up to a certain point, than in those cases of acne rosacea where there is a "red face" with numerous papular and pustular lesions, with little or no capillary dilatation. When, however, we have the second form to deal with, and especially when the disease has become thoroughly established, only thorough and long-continued treatment will avail. Where the capillary enlargement is already marked, treatment beyond a certain point is, in most cases, little more than palliative; it may prevent further progress, but this is much, and patients should be encouraged to persevere, especially in the treatment by scarification.

Addison's Keloid. (See *Morphæa*.)

Ainhum (*ine-hum'*) is a disease peculiar to the African race, who first gave it this name, which signifies "to saw," and characterized by a slow, progressive, fatty degeneration, generally with increase in volume of the toes, especially the smallest, resulting from a linear strangulation. The affection begins by a not quite semicircular furrow in the digito-plantar fold, occupying the internal and inferior portion of the root of the small toe, without any marked inflammation, pain or ulceration which may attract the attention of the individual so affected. Gradually the furrow becomes deeper, and sometimes slightly ulcerated, and extends itself to the upper (dorsal) and external surface of the toe, thus forming, at last, a circular groove; while the anterior part of

the toe—that is, that which is in front of the groove—becomes swollen to twice or three times its natural size and loses its shape, becoming oval or almost globular. The epidermis becomes rough; the nail is said not to become particularly changed, but it is turned outward by the rotation of the toe on its axis, which always takes place when the pedicle by which the toe remains attached to the foot becomes very thin, and the anterior part of the toe interferes with progression. Spontaneous amputation sometimes takes place. The affected parts preserve their normal sensibility.

The progress of the affection is very slow, the time elapsing between the formation of the original furrow and the more or less perfect completion of the spontaneous amputation having been, in some instances, ten years or more. When the little toe of one foot has been affected some time, that of the other foot becomes usually likewise diseased. After both the small toes are removed, neither any other toe, nor any of the fingers, nor any other part of the body becomes affected. (In rare cases the little fingers have been found affected.)

Brazil, the West Indies and the West Coast of Africa are the commonest localities of the disease, but within the last few years cases have been reported from the southern United States. Recent pathological investigations, particularly those of Wile, point to the intentional and persistent application of a ligature by the patient as the cause. The only treatment, after strangulation has been effected, is the early removal of the useless and cumbersome member.

Albinism. The condition which has been termed albinism consists in a congenital absence of the normal pigment. It may be partial or general. In the latter case the subjects are known as albinos. Here the skin is of a milky-white or pinkish color, the hair white, yellowish-white or red, and even the iris and choroid of the eye are more or less deprived of pigment. In the negro the eyes are not affected, and cases are on record where the color of the affected patches has returned. This affection is to be carefully distinguished from *vitiligo*, q. v.

Alopecia (*Al-opē'-shī-ā*). Alopecia is a condition of more or less complete baldness, resulting from a deficient growth of the hair. It may be considered under the heads of *congenital*, *senile*, *idiopathic premature* and *symptomatic premature*.*

Congenital alopecia is the name given to those rare forms of the disease where an individual is born without hair. In one such case microscopic examination showed absence of hair bulbs. I am acquainted with the case of an otherwise healthy infant, upon whose scalp only lanugo (fine downy hairs) grew until after the third year of life. A hereditary predisposition to scanty growth, or early loss of hair, may often be traced.

Senile alopecia, or the baldness of old age, is connected with the general atrophy of the cutaneous tissues which occurs at this period of life. The hairs become gray, thin and dry, and are cast off, not to be renewed. The hairs of the body generally become thinner, and drop out to a less extent, at the same time.

Idiopathic premature alopecia, or premature baldness, may take place either rapidly, in the course of weeks or months, or, as is most generally the case, slowly, through a period of years. The hair may begin to come out at any period after puberty, although it does not generally fall much before the age of twenty-five to thirty. The scalp is healthy, to all appearance, no pityriasis being present. At first only a few hairs fall, and these are succeeded by new ones growing from the same follicles, but coming earlier to maturity and falling out before they have attained a normal length. The process is progressive, more and more hairs falling prematurely. Each new crop of hairs is shorter and finer than the preceding, until, finally, only lanugo or short, fine, soft, woolly hairs are produced. In the course of time even these are no longer produced; the hair follicles become atrophied, and complete baldness ensues. The process is sometimes arrested and normal hairs may be produced for a time, but the improvement is apt to be transitory.

This form of alopecia is very common; it is more frequent

* Alopecia areata is considered under a separate head.

among men than among women; as in senile alopecia, it ordinarily begins about the vertex and extends toward the forehead.

Symptomatic premature alopecia includes those forms of more or less complete baldness, caused by local or general diseases. The loss of hair may be temporary or permanent. Fevers, nervous disorders, violent shocks to the nervous system and mental distress, worry or overwork, may give rise to sudden or gradual loss of hair. In a case coming under my own care an attack of cystitis seemed to have been the exciting cause.* Local affections, particularly those attacking the follicles, as seborrhœa sicca, pityriasis and lupus erythematosus, may give rise to baldness, generalized or in patches, which may be permanent. When baldness results from erysipelas, psoriasis, eczema or variola, the hair is apt to return again after the disease has passed away and with the recovery of the general health. Syphilis and leprosy also occasion alopecia. In syphilis loss of hair occurs in the first general outbreak, just as in other fevers; the hair is then usually reproduced. Later in the history of the disease it may occur in consequence of local lesions, and when these are ulcerative the hair does not grow again. Such cases are rare, and the notion that has prevailed in some quarters, that premature baldness is the result of syphilis, is absurd, except in the limited sense that debauchery may reduce the tone of the general system, and thus give occasion to falling of the hair.

* A curious case of complete alopecia is reported in the *Gazette des Hôpitaux*, No. 83, 1879. A girl, aged 17, who had always enjoyed good health, had one day a narrow escape from being crushed by a floor giving way beneath her. She was very much frightened, and the same night began to complain of headache and chills. The next morning she felt restless, and had itching of the scalp. During the following days she steadily improved, with the exception of the itching. One day, in combing her hair, she noticed that it came out in great quantities. Three days later, she was perfectly bald; and in two more days she had lost every hair on her body. Her general health was good. The patient remained bald and was still so when seen, two years later, by the reporter. (This case resembles some cases of alopecia areata.)

The remedies to be used in alopecia must depend upon the exciting cause and the circumstances of the disease. The first two forms described are, of course, not amenable to treatment. Idiopathic premature baldness, when there is a hereditary tendency to an early fall of the hair, is almost hopeless as regards any effect to be produced by medication. When there is no history of early baldness in the family, the disease, when taken in hand early, can often be arrested in its progress. Local stimulation is the plan of treatment to be followed. Weekly, semi-weekly, or even daily shampooing may be practiced with the soapy wash known as "spiritus saponis kalinus":—

R. Saponis viridis, ℥iv
 Alcoholis, f℥ij. M.
 Dissolve with heat and filter.

This tends to keep the scalp free from the natural accumulation of sebum and epidermic scales, and likewise stimulates the scalp. After shampooing, the scalp is to be thoroughly cleansed with clear water, dried as thoroughly as possible, and the following oil is to be applied:—

R. Acidi carbolici, gr. xv
 Glycerinæ, f℥ij
 Aquæ cologniensis, ad . . . f℥j. M.

A good method of applying this oil, so as to get the full benefit of it upon the scalp, is to divide the hair in long "parts," by means of a comb, and then, with the aid of a Barnes' dropper, such as is used for dropping solutions into the eye, let a drop or so of the oil be placed here and there upon the scalp, in the line of the part, at intervals of an inch, and well rubbed in with a soft brush like a tooth brush. Having gone over the scalp in one line thus, let new parts be made, parallel with the first, and the same procedure gone through with. Thus each portion of the scalp is in turn reached by the oil, which is thoroughly rubbed into it, a comparatively small portion getting into the hair to make a mess, as such applications certainly will do if rubbed in at random.

After a time the shampooing with the soap spirit may be dispensed with, or only employed at long intervals, as, in the case of women, especially, this is a very troublesome business.

The inunction with the oil should, however, be persevered in until the hair has ceased to fall, or until the case must be given up as hopeless. The majority of cases, however, will do well under this treatment, if carefully carried out. I think that local treatment alone can be relied upon in this form of alopecia, but, of course, each case must be judged by its total aspect, and the patient's general health cannot be left out of account.

The treatment of that form of alopecia which is in the stricter sense symptomatic, such, for instance, as is found in nursing women, in students preparing for examination, and after exhausting illness or mental troubles, is in general the same as that above given, only that here the patient's general condition is more obviously at the bottom of the alopecia, and attention must first be given to obviating or neutralizing the cause. Iron, quinine, arsenic, occasionally cod-liver oil, and, above all, nuxvomica and strychnia, are the remedies on which we chiefly depend. In addition, moreover, to the local remedies above given, cold-water douches, frictions, frequent brushing and the application of one of the stimulating washes to be mentioned under alopecia areata, will be found useful. Massage has been employed with marked success by Dr. Emma W. Brooke, of this city, both in this form of alopecia and also in certain cases of the other varieties.

The prognosis in premature idiopathic baldness must always be guarded. If we can stop the fall of the hair and prevent matters getting any worse, that is about all that can be expected. To restore what has been already lost is usually more than we can succeed in accomplishing. In baldness following fevers, etc., on the other hand, much can be hoped for as the result of early and vigorous treatment faithfully carried out. Syphilitic alopecia, of course, demands specific treatment, local means not

PLATE III.
SHOWING THE PROGRESS OF A CASE OF ALOPECIA AREATA.



APRIL 19TH, 1886.



JULY 20TH, 1886.

(See Article p. 3)

being neglected. The following ointment is useful when distinct syphilitic lesions exist in the scalp :—

R. Hydrarg. bichlor, gr. ss
 Tinct. cantharidis, f ℥ j
 Medullæ bovis, ʒ ss
 Ol. rosæ, q. s. M.

Or, when a fluid preparation is more adapted to the purpose, the following may be used :—

R. Hydrarg. bichlor, gr. ss
 Tinct. cantharidis, f ℥ ij
 Ol. ricini, ʒ ss
 Alcoholis, ad f ʒ j. M.

Alopecia Areata. Alopecia areata is an atrophic disease of the hair system, characterized by the, usually sudden, appearance of one or more circumscribed, whitish bald patches, varying in size and shape, or of more or less universal baldness. Alopecia areata may attack any portion of the hairy surface, but the scalp is by far the commonest seat of the disease. In rare instances the entire hair system is involved, and the patient may not only lose the hair from the scalp, but that of the eyebrows and lashes, the beard, the axilla and pubis, and the fine hairs over the general surface of the skin. A number of such cases have come under my observation, among others those of a mother and daughter, respectively thirty and fifty years of age, both of whom showed complete absence of hair from the scalp, pubis and axillæ, of some years' standing. Upon the scalp the disease is usually observed to consist of one or several patches of baldness, roundish, sharply circumscribed and conspicuous. They may vary in size from a small coin to the palm of the hand. The baldness is generally complete, the area presenting a whitish, perfectly smooth, polished surface, often without a trace of hair. Less frequently a thin growth of hair persists over the nearly bald areas. The skin is slightly or not at all altered, excepting that the hair follicles gradually atrophy.

The course of the disease is variable; in some instances the hair thins out slowly; in other cases a handful of hair may come

out in a single night, leaving a fully developed patch. The ultimate size of the area is soon reached, and it usually grows no larger. When several patches exist they usually form one after another, and one may be recovering while another is forming. The disease may continue weeks, or oftener months, or even a year or two; its course is very variable. Relapses are not uncommon. A growth of lanugo, or fine, downy hairs, often occurs in the course of the disease, leading to the false hope that the hair is at length about to return; but the soft, fine hairs drop again, leaving the patch as bald as before. When, however, complete repair once sets in, recovery is occasionally rapid. The new hair is sometimes at first pale, gray or mixed in color, subsequently assuming the normal or even a darker shade. There are no subjective symptoms, as a general thing, but patients now and then suffer from neuralgia, or notice a premonitory itching, heat, or soreness.

The causes which produce the disease are not understood. It is non-parasitic in its nature and is not contagious; at least that has hitherto been the general belief. The opinion is held, however, by some, that a certain number of cases are due to a very minute vegetable parasite. Enough is not as yet known to pronounce with certainty upon this point, but I think that we are justified in warning patients, particularly children, against exchanging caps and otherwise coming into close contact with those suffering from this affection. The majority of cases of alopecia are, in all likelihood, due to some functional nerve disturbance, which itself, according to A. R. Robinson's recent researches, may be caused by a parasite about the hair papillæ, causing impaired nutrition. It has been noted to follow neuralgias, sudden nervous shocks, and debility resulting from various causes. In many cases, however, patients enjoy excellent health, and no appreciable cause for the attack can be assigned. The affection is not very uncommon, the American statistics showing its occurrence in 794 of the 123,746 cases reported, *i. e.*, in .641 per cent.

Alopecia areata is more apt to be mistaken for tinea tonsurans

PLATE IV.
SHOWING THE PROGRESS OF A CASE OF ALOPECIA AREATA.



OCTOBER 18TH, 1886.



DECEMBER 16TH, 1886.

(See page 51.)

than for anything else.* The suddenness of the attack, however, the more or less complete baldness, the absence of desquamation, the whiteness and remarkable smoothness of the patch, always enable it to be distinguished from *tinea tonsurans*. Difficulty can only arise in old cases of *tinea*, where the short, characteristic hairs have disappeared; but even here more or less desquamation exists, with a grayish "goose-flesh"-like surface, very different from the ivory-like appearance of the scalp in alopecia areata. *Tinea tonsurans* begins as a small patch and spreads slowly; there are always, or almost invariably, a certain number of nibbled-looking, broken-off hairs in the patch, and there is a history of contagion. The microscope revealing the characteristic fungus (see under *Tinea tonsurans*) will settle the matter, and should always be employed in cases of doubt.

The treatment of alopecia areata should be both internal and external. The ordinary tonics—iron, quinine, arsenic and nuxvomica, or strychnia—are ordinarily to be employed. In some cases, phosphorus and cod-liver oil may be given with advantage. There are few skin affections where the skill of the practitioner in general treatment is more demanded. Often the patient's general health appears to be perfect, and only after long and careful search can the weak point be found to which the failure in nutritive power is to be attributed. Occasionally the minutest examination will fail to yield any evidence of disturbance of the normal equilibrium of the system. Treatment must then be purely empirical. Hygiene is always of importance.

The external applications which have been found useful, or which have been thought to be of use, in alopecia areata, are all directed with a view to one single object, namely, to stimulate the skin and to cause a more active flow of blood to the affected

* There is a form of syphilitic alopecia where the hair falls entirely from a segment of the eyebrow. This, which is pathognomonic of syphilis, is sometimes the only sign of that disease present, and may be confounded with alopecia areata. The occurrence in this locality alone is, however, suspicious of syphilis.

parts. Alcohol, cantharides, the essential oils, glycerine, castor oil, carbolic acid, tar, iodine, turpentine, ammonia, salts of mercury, veratria, acetic acid, tannic acid, nux vomica, pepper, quinine, sulphur, kerosene oil and crude petroleum, are among the remedies usually recommended as most valuable. These substances may be applied either in the form of ointments or of lotions, in sufficient strength to produce a stimulant or rubefacient effect, once or twice daily, as occasion may require. Before making any of these applications it will be well to have the scalp or other affected part washed well with castile soap and water, or, better, with the spiritus saponis kalinus. (See *Alopecia*.) After washing, the scalp is to be dried with a coarse towel, and brushed with a thick-set but not too stiff brush, until moderately stimulated.

Patients sometimes express the fear that a vigorous application of the external remedy may itself produce baldness to a greater degree, but it will be found that after the patches have fairly formed the remaining hairs are firmly seated. Among the formulæ published in such numbers in books and medical journals, those following will be found most efficient in the majority of cases :—

R. Tinct. cantharidis,
Tinct. capsici, aa f ʒ ss
Olei ricini, f ʒ ss
Aquæ cologniensis, f ʒ j. M.

Sir Erasmus Wilson used to recommend the following :—

R. Olei amygdalæ dulcis,
Liquoris ammoniæ fort, . . aa f ʒ ss
Olei limonis, f ʒ ss
Spiritus rosmarini, . . . ad f ʒ iv M.

Wilson also recommends frictions with a liniment of aconite, etc. :

R. Tinct. aconiti rad., f ʒ iv
Chloroformi, f ʒ ij
Liquor ammoniæ, f ʒ j
Pulv. camphoræ, ʒ j
Olei olivæ, ad f ʒ ij. M.

Oil of turpentine, brushed or rubbed into the patches with a

PLATE V.
SHOWING THE PROGRESS OF A CASE OF ALOPECIA AREATA.



FEBRUARY 18TH, 1887.



APRIL 18TH, 1887.

(See page 52.)

stiff brush, once or twice a day, until the scalp becomes sensitive, is recommended by some writers. The late Tilbury Fox recommended the following, which I have used with satisfaction :—

R.	Tinct. nucis vomicæ,	f 3 ss	
	Tinct. cantharidis,	f 3 vj	
	Glycerinæ,	f 3 ij	
	Aquæ destillatæ,	f 3 iss	
	Aquæ rosæ,	f 3 iij.	M.

I have sometimes blistered the bald patches with cantharidal collodion with success. Electricity also is used in some cases with advantage, four to ten cells of the constant current battery being used, and the negative pole placed in contact with the diseased patch. The treatment of alopecia of the beard is essentially the same as that of alopecia of the scalp.

The prognosis of alopecia should be guarded. Sometimes recovery takes place in a few months, in other cases it may be delayed for years. Now and then the hair is not restored at all. As a rule, in young persons, the baldness is not permanent. Treatment should be persevered in.*

Angioma (*anjē-ō'-ma*). Angioma is a new growth of the skin consisting wholly or in part of new formed blood or lymph vessels.

Blood vascular growths occur in three forms, *nævus vasculosus*, *telangiectasis* and *angioma cavernosum*.

Nævus vasculosus includes those vascular anomalies of the skin which are either visible at birth or very soon after. It occurs in the form of one, or sometimes several, spots, from the size of a small pin-head to that of the palm of the hand, or larger tracts. While these are usually level with the skin, the smaller ones are occasionally found raised like small red tumors. The color of the lesions varies greatly. Usually it is a bright red, but at times it has a deep port-wine tint. In some cases the color is like a stain or an erythematous blush. At other times

* The plates appended give a series of views of a case of alopecia areata, showing the entire evolution of the disease, which lasted a year, from its beginning to the maximum of loss of hair, and then the gradual restoration of the hair, at first gray, again.

tortuous blood vessels may be seen coursing over the surface. Pressure by the finger causes a momentary pallor. The epidermis over the lesions remains unchanged. On superficial inspection the lesions seem sharply defined, but on closer examination the edge of the vascular area is seen to fade gradually into the surrounding skin.

Nævus vasculosus has little tendency to grow when once developed. Hyde says that occasionally, especially in the case of infants but a few days old, phagedæna or gangrene will suddenly occur in these patches without appreciable cause (probably in consequence of the occurrence of thrombus), and the entire growth will slough away, leaving a scar exactly delineating the area of the former nævus.

As regards the cause of nævus, the explanation given by Virchow, namely, superfluous vascular formations in those portions of the embryo at which junction of the various parts takes place, seems most plausible. A small quantity of matter left over, squeezed out between the joints as it were, like superfluous building material, forms these nævi and the similar growths of lymphatics, hair, pigment, etc.

Nævus vasculosus simplex is most frequently met with about the head, and next to this upon the trunk, and then the extremities. Among 333 cases observed by Weinlechner, 243 were found upon the head. Of these 200 were in the face, of which 54 were frontal, 35 palpebral, 32 nasal, 30 labial, and 26 buccal. Of 20 cases of nævus of the face which I have seen, 12 were in females, and 8 were in males. As regards position, 14 were on the right side, 4 on the left side, and 2 appeared to be symmetrical.

The treatment of vascular nævus, aside from the radical surgical measure of bodily removal by the knife or ligature, has one principle underlying it, namely, that of exciting enough inflammatory action in the growth to obliterate the caliber of the vessels composing it. This may be accomplished in any one of a number of ways. Minute nævi no larger than the head of a pin may be destroyed by puncture with a red-hot needle, or with a needle charged with nitric or glacial acetic acid, or by electro-

lysis, with the aid of one or more needles connected with the positive pole of a four- to ten-cell combination of a constant current battery. (*See Electricity in the treatment of skin diseases.*) When the growth is a little larger, from the size of a split pea to that of a ten-cent piece, it may be treated by caustic applications. Of these, sodium ethylate is one of the most efficient. It rarely causes severe pain, and may be applied on the end of a glass rod. Other caustics are nitric acid and glacial acetic acid, which are available in the larger as in the smaller-sized nævi. Solution of caustic potassa is also occasionally used, although this is a remedy of dubious value, since, to get it strong enough for a proper effect on the tissues, we must make it so powerful as to run a risk of too rapid action and consequent hemorrhage. Injections of tincture of the chloride of iron, with tincture of cantharides and the like, into the substance of the growth, have been recommended, but these methods are not without danger, and fatal cases of embolism have been reported as following the use of the iron solution. Vaccination has long been practiced in suitable cases. The virus must be pricked in with needles at a suitable number of contiguous points simultaneously. Linear scarification, as used in telangiectasis and rosacea, may occasionally be employed, but this, as well as punctiform scarification, when used with uncharged points, will usually be found unsuccessful. The galvano-cautery and Paque-lin's cautery have also been used.

The prognosis of nævus vascularis is usually favorable. The growth gives rise to little or no sensation, rarely increases in size, and sometimes disappears spontaneously. Occasionally, however, the smaller and prominent growths undergo malignant change, and this, as well as their unsightly appearance, should be considered by the physician who may be called upon for an opinion as to the advisability of treatment.

Telangiectases are new growths consisting of blood vessels, and in this respect are similar to nævi. They differ from the latter, however, in being acquired, and not congenital. They are commonly first observed in adult life and occasionally multiply

with advancing years. They occur in localized and in diffuse forms. The diffuse form is excessively rare. I have observed one case.

The localized forms of telangiectasis are characterized by the occurrence of minute, flat or slightly elevated, pin-head to pea-sized maculæ; diffuse patches; linear ramifications of individual vessels or contorted congeries of a plexus of the latter, usually pinkish or violaceous in color. The lesions are non-inflammatory and painless, and occur single or in small numbers, chiefly upon the face, but also upon the neck, back of the hands, etc. They may occur in the neighborhood of various skin diseases, of cicatrices, and sometimes upon the surface of tumors. *Rosacea* is a sort of telangiectasis. The treatment is the same as that of *nævus vasculosus*.

Angioma cavernosum consists of a dense framework of new-formed connective tissue enclosing loculi or chambers of varying capacity, containing blood, and not only communicating with each other, but with the larger vessels in the vicinity. They are said to be rarely congenital, but are acquired soon after birth. Sometimes they originate from a *nævus* or superficial telangiectasis. Often when fully formed they are distinctly encapsulated. The baggy purplish masses or tumors, filled with contorted, vein-like channels, sometimes met with on the faces of adults, are cavernous angiomas. They belong rather to the field of the surgeon than to that of the dermatologist.

Angioma Pigmentosum et Atrophicum. A new affection, called also by various other names, as "xeroderma pigmentosum," "lioderma essentialis cum melanosi et telangiectasia," "melanosis lenticularis progressiva," "atrophoderma pigmentosum," etc.

The disease usually begins in childhood, by the formation of "freckles," chiefly involving those parts of the skin usually uncovered. Interspersed among the pigment spots are small white atrophic spots and cicatricial areas, and also some small stellate vascular patches. The whole forming the picture described in the title which was given the disease by R. W. Taylor, to whom we owe much of our knowledge of this rare affection.

In addition to the angiomas, pigmentary and atrophic spots, most cases present also warty, fungating or lobular excrescences. These in time take on malignant action. The eyes may be the seat of new growths and vegetations.

The affection usually begins in early life, in its first or second year. Most of the cases, though not all, have terminated fatally after the lapse of years. Treatment has thus far proved unavailing.

Anidrosis (*An-idro-sis*). Anidrosis is a functional disorder of the sweat-glands, consisting in a diminished and insufficient secretion of sweat. It sometimes occurs in connection with ichthyosis. (See *Ichthyosis*.) In rare cases an individual ceases to sweat entirely at times. In these cases the health is greatly impaired, and much suffering may ensue, especially in warm weather. The disease in this form is very rare. In the treatment every effort should be made to increase the activity of the skin. Hot or cold baths, steam baths and frictions may be employed. Pilocarpin would seem to be indicated, but I do not know if this remedy has been employed as yet. Of course, the general health should be looked after.

Aniline Dyes, skin disease produced by. (See *Dermatitis*.)

Anthrax. (See *Malignant Pustule*.)

Argyria. (See *Chloasma*.)

Army Itch. (See *Scabies*.)

Arnica. Skin disease from tincture of. (See *Dermatitis*.)

Artificial Eruptions. (See *Feigned Eruptions*.)

Atrophia Cutis. (See *Atrophy of the Skin*.)

Atrophy of the Skin. There are several forms of cutaneous atrophy, some of which seem to occur idiopathically and without obvious cause, while others are the result of some general disorder or of some injury to the nerves. In the "glossy skin" of writers upon nervous diseases, the extremities, especially the fingers, become pinkish or reddish, smooth, shining and glossy, as though varnished. The lesions resemble chilblains in appearance. The affection is accompanied by burn-

ing pain, and follows intractable neuralgia, wounds and other lesions of the nerve trunks.

General idiopathic atrophy of the skin is a very rare condition, in which the skin becomes dark and discolored in patches and swollen, then contracts, becomes of an olive color, and seems too small for the body. The sensibility of the skin is deadened and the movements of the body effected with difficulty.

Another form of atrophy of the skin is that known as "atrophic lines and spots." This form of atrophy may also be idiopathic or symptomatic. In the first case it comes without apparent cause, the patient's attention often being attracted to the lesions only by accident, and after they have existed for some time. The lines (*striae atrophicæ*) are usually an eighth to one-quarter of an inch in diameter, and one to several inches in length; the spots (*maculae atrophicæ*) are roundish or ovalish, and from a pin-head to a pea or finger-nail size. Both lesions present a smooth, glistening, scar-like appearance, are perceptibly thinned to the touch, slightly depressed or grooved, and show a peculiar mother-of-pearl lustre. The lines are usually found in numbers running parallel to one another, and in an oblique direction. The spots are generally isolated. They may occur on any part of the body, but are usually found on the buttocks, trochanters, pelvis, and on the thighs, upon both extensor and flexor surfaces. They run a slow course, and give rise to no inconvenience. Their course is obscure; they are sometimes found in connection with morphœa. (See *Morphœa*.)

Symptomatic lines and spots of an atrophic character are those formed by stretching of the connective tissue bundles, as seen on the skin of the abdomen in pregnancy, etc. The atrophic diseases of the skin are rare, but 23 cases being reported in the American statistics, out of 123,746 or .019%.

Hemiatrophia facialis. Unilateral facial atrophy is a trophic disease of the skin marked by a gradual withering of the tissues, affecting one side of the face and involving at first the cutaneous and subcutaneous tissues, and later the deeper tissues and bones.

The affection begins as a circumscribed whitish, yellowish or brownish discoloration of the skin, accompanied by rapid thinning. The discolored patch then sinks in, as a result of the atrophy of the subcutaneous tissues, and finally the thinned parchment-like skin lies directly upon the bone, without, however, becoming adherent to it. The various appendages of the skin take part in the affection. The hairs turn white and sometimes fall out, the sebaceous secretion is perceptibly diminished, while the secretion of sweat is at times increased.

The appearances described are commonly at first and most markedly manifested in the sub-orbital or the lower maxillary region, but the chin, forehead or temple may show the trophic depression. The disease may begin at various points simultaneously. In addition to involvement of the external tissues, atrophy of the tongue and soft palate may occur. Hemiatrophia facialis runs a rapid progress at first, and later remains at a standstill for long periods, to take up fresh activity some time afterward.

Hereditary influence has not been proved. Women are more frequently attacked than men. The affection shows itself before the thirtieth year, and usually between the tenth and fifteenth year. Of two cases which have come under my observation, one was a boy the other a young man of twenty, who, however, had had the affection some years.

The causes of the disease are not accurately known, and there is much diversity of opinion on the subject. By some the disease is due to some injury or disease of the sympathetic, by others due to some direct influence exerted on the trophic fibres of the trifacial or other nerves. Another theory is that the peripheral nerves are at fault, while some French writers conceive the disease to depend upon a primary atrophy of the fatty layers beneath the skin. Facial hemiatrophy has in several cases been observed to follow measles or scarlatina. One case is on record where the disease was bilateral, and another where the shoulder and wrist were involved as well as the face.

Hemiatrophia facialis may be mistaken for vitiligo or alopecia

areata, but close examination will show an actual loss of substance which will distinguish it from these milder affections.

A diagnosis having been made, the affection, for practical purposes, passes out of the hands of the dermatologist. Electricity forms the most hopeful plan of treatment, but the prospect of restoration to health is highly unfavorable.

Atrophy of the Hair. (See *Hair, Diseases of*, and *Alopecia*.)

Atrophy of the Nail. (See *Nail, Diseases of*.)

Baldness. (See *Alopecia*.)

Barbadoes Leg. (See *Elephantiasis*.)

Bakers' Itch. (See *Eczema of the hands*.)

Barbers' Itch. (See *Tinea sycosis*.)

Baths in Skin Diseases. The baths ordinarily employed in diseases of the skin are composed of water alone or containing substances in solution. The effects produced by baths upon the skin are of several kinds. In the first place, the temperature of the bath, without regard to its contents, has a certain effect, while the influence of water alone, or of substances which may be dissolved in it, may produce either a local effect, or, in the latter case, may bring about constitutional changes, according to the medicinal agent employed.

Lukewarm and moderately hot baths diminish irritability of the peripheral ends of the sensory nerves. For this reason such baths are useful in those skin diseases in which *pruritus* is a prominent symptom. General pruritus of an idiopathic character is nearly always relieved by the use of warm baths, which should in most cases precede the application of the more decided antipruritic remedies. The addition of "indifferent" substances, as starch, bran, oat- or corn-meal, serves to soothe the inflamed skin in eczema, particularly when the skin has been broken, leaving a moist surface. Here crude water alone sometimes irritates the skin, while the addition of some starchy substance soothes and relieves pain and itching. With a similar end in view, alkalies are added to baths, their soothing effect being probably due to some osmotic action, similar to that which takes

place where carbonate of sodium solution is employed in dressing burns. In the intense dermatitis of burns, and in skin affections like pemphigus, where the patient is more or less flayed, the continuous tepid bath, as devised by the elder Hebra, offers a medium in which the patient can live without such anguish as constantly tortures him when exposed to the air, and even with some greater chance of recovery.

The question of the absorption either of water or of substances dissolved in water, through the uninjured skin, is one which has been discussed for many years without any perfectly satisfactory conclusion having been reached. Recent investigation, however, appears to indicate that imbibition of water, and of salts dissolved in water, may occur, so far as the superficial layers of the epidermis are concerned, in the bath, such imbibition being favored by warmth, long immersion, previous washing of the skin with soap, and repeated immersions. On account (possibly) of the absence of sebaceous glands on the soles and feet, these surfaces absorb more rapidly. The fact seems to be, however, that it is really imbibition rather than true absorption which takes place, just as a shingled roof may imbibe a considerable amount of moisture during a heavy rain only to give it out again under a heated sun, the interior of the house remaining perfectly dry all the time. Absorption, then, in the proper sense of the term, of water, and of non-volatile substances contained therein, has never been proved to take place through the skin of adults in ordinary baths, in spite of numerous researches and assertions tending to prove such a result.

On the other hand, it is known that gases and volatile matters dissolved in water may be absorbed through the skin. Sulphurous acid and free iodine are thus taken into the system in baths, while free carbonic acid is not absorbed excepting in the use of waters particularly rich in this gas, and then only in minute quantities.

With these facts in view, the use of baths in diseases of the skin is to be restricted to such cases as can in reality be benefited by them. Allusion has already been made to the use of warm-water baths in allaying irritation of the peripheral nerves. A

further use is to be found in those more or less generalized skin diseases which are accompanied by diminution in the normal secretion of the skin, as *ichthyosis*. Here the heat and moisture induce further secretion, and the action of the water in macerating the rough, dry epidermis gives great relief and prepares the way for oleaginous emollients.

The simple warm bath, or the bath containing carbonate of sodium, also finds its place in the treatment of skin diseases accompanied by the formation of crusts and scales over a considerable area of the body. Maceration detaches these otherwise intractable masses and prepares the surface for direct medication. (See *Eczema*, *Psoriasis*, *Syphilodermata*, etc.)

The imbibition of water and watery solutions by the surface layers of the epidermis is taken advantage of in the treatment of parasitical diseases, particularly of scabies. Here the medicated water does certainly penetrate far enough to destroy the itch insect and its ova, and no further penetration is needed.

The employment of vapor baths to facilitate the penetration of medicinal substances is shown in the treatment of syphilitic eruptions by the mercurial vapor bath. Here the body, immersed in watery vapor until free perspiration takes place, is in a fit condition to absorb the mercurial vapor disengaged simultaneously.

An apparent exception to the rule of non-absorption of salts in watery solution is found to obtain in the case of infants treated for hereditary syphilis by baths of corrosive sublimate. A syphilitic infant placed in a small tub of water in which ten grains of corrosive sublimate have been dissolved will absorb a sufficient quantity of the drug, after several such baths have been taken on successive days, to influence the system and induce a rapid improvement in all symptoms. Whether absorption takes place through the unbroken integument or through the mucous membrane of the anal or genital orifices, I am unable to say, but the clinical fact is established that absorption does take place.

The following diseases are those in which baths may be employed at times with advantage: *Erythema*, *Urticaria*, *Eczema*, *Pemphigus*, *Lichen ruber*, *Prurigo*, *Psoriasis*, *Pityriasis rubra*,

Dermatitis, Ichthyosis, Scleroderma, and the *neuroses* of the skin, particularly *Pruritus*. The syphilitic eruptions of the skin, when generalized, are often relieved by mercurial baths acting locally in connection with internal treatment; while, in the case of infants, a general impression on the economy, as stated above, may be obtained by mercurial baths. Of course mercurial vapor baths have a constitutional as well as a local effect in adults. Parasiticides, chiefly sulphur and its compounds, act favorably in the form of baths in *tinea trichophytina*, and *tinea versicolor*; also in *scabies*. When used in *pediculosis vestimentorum*, baths are chiefly useful as antipruritics. The insects causing the disease residing, as they do, in the clothing, are not destroyed by bathing. For further particulars regarding the employment of baths reference may be made to the description of the more important of the affections enumerated above.

The following formulæ for the more commonly employed baths may be given in this place. The temperature of these baths should not, it is understood, vary much above or below 90° F. And since, to obtain their full effect, baths must often be prolonged to half an hour or even an hour, the temperature should be kept up by successive additions of hot water, and the room in which the patient takes the bath should be kept at an even warmth. Evening is the best time, in general, for taking medicated baths, and the patient should be warned against going into the bath soon after a hearty meal. These points seem elementary, but there is much ignorance upon the subject. The medicated baths commonly employed in diseases of the skin are the following:—

THE ACID BATH :—

R. Acidi nitrici fort., f ℥ iss
 Acidi hydrochlorici fort., f ℥ j
 Aquæ, C xxx. M.

Employed in *pruritus, urticaria* and *papular eczema*.

THE ALKALINE BATH :—

R. Sodii carbonat., ℥ iv
 Aquæ, C xxx. M.

Another—

R. Potassii carbonat., ℥iv
Sodii carbonat., ℥iij
Sodii biborat., ℥ij. M.

Use one such powder in a thirty-gallon bath, with half a pound of starch, the latter previously boiled with water to make "clear starch."

Employed in *acute eczema*, *ichthyosis*, *psoriasis*, *erythema*, and *urticaria*.

A formula employed for children is as follows:—

R. Pulv. sodii biborat., ℥j
Sodii carb., ℥ij
Potassii carb., ℥iij. M.

Two to four teaspoonsful for every gallon of water, with double the amount of dry starch.

THE CREASOTE BATH :—

R. Creasotii (seu acid carbolic), f℥ij
Glycerinæ, ℥ij
Aquæ, Cxxx. M.

This is employed in *pruritus* and in certain cases of *squamous eczema*.

THE SULPHUR BATH :—

R. Potassii sulphureti, ℥iv
Aquæ, Cxxx. M.

This is employed in *psoriasis*, *pityriasis*, *acne* and *impetigo* and as a specific in *scabies*. Another formula is the following :—

R. Sulphur. precip., ℥iv
Sodii hyposulphit., ℥j
Acid sulphuric. fort., f℥j
Aquæ Cxxx. M.

This last is employed exclusively for *scabies*.

SUBLIMATE BATHS :—

R. Hydrarg. bichlor. corrosiv., ℥ij
Ammonii chloridi, ℥iiss
Aquæ, f℥iiss. M.

In a bath of thirty gallons.

This is sometimes employed in *pruritus*.

The sublimate baths, which are so useful in *infantile syphilis*, are composed of ten grains of bichloride of mercury to each bath, in a child's bath tub. Tan baths, containing a handful of fresh tan-bark to each bath, have been recommended in *purpura*.

Tar baths are employed by rubbing tar into the diseased parts of the patient's skin and then employing an ordinary water bath. They are used in *psoriasis*.

The natural mineral springs which have always enjoyed a high reputation in diseases of the skin, owe it almost, if not entirely, to the properties of the water alone or to gases dissolved therein. The various mineral ingredients are contained in too small quantities to exercise the effect they are usually found to produce, and, until far more accurate observations shall have been made than are at present on record, a well-founded skepticism as to the modes of action of mineral springs must continue to exist.* However, whatever our theories on the subject, it cannot be denied that certain skin diseases are at times benefited by recourse to the various health resorts where such springs are found.

Bed-bug. This insect is occasionally the cause of an urticaria-like eruption on the skin, which is liable to be mistaken for other diseases. The lesion produced by its bite is of the nature of an urticarial wheal, consisting of a circumscribed, slightly raised, split-pea sized erythematous spot, with a whitish centre, and at times attended with considerable swelling. A reddish blood spot, or hemorrhage, under the skin remains after the wheal has subsided. The sensation is at first of a very slight prick, followed in a few minutes by burning and itching. In children the disease is often taken for "hives" or "nettlerash" (urticaria). The bites of the bed-bug may be relieved by lotions containing alcohol, carbolic acid, vinegar, dilute acetic acid, corrosive sublimate, lead water, spirits of hartshorn, etc., sponged upon the parts. The best preventive against bugs in beds and other haunts is solution of corrosive sublimate. Pyrethrum powder is also useful.

Bloody Sweat. (See *Purpura*.)

* A recent brief visit to the Strathpeffer Spa, in the Highlands of Scotland, has caused me to modify somewhat my views upon this subject. Under the careful and scientific guidance of the Resident Physician, Dr. Fortescue Fox, patients suffering with some forms of eczema are unquestionably benefited by the strong sulphur baths, and thermal waters of that resort. A full report upon these waters is much to be desired.

Body Louse. (See *Pediculus Corporis*.)

Boil. (See *Furuncle*.)

Bromidrosis (*Brom'idrosis*). Bromidrosis is a functional disorder of the sweat glands, characterized by more or less sweating and an offensive odor. The affection may be local (it usually occurs on the soles), or general. The odor may be of a general disagreeable character or it may be distinctive, resembling the smell of a goat or of urine. Cases have been reported where an odor resembling that of violets or pineapple has been exhaled during attacks of hysteria, anger or sexual excitement. The treatment is that of hyperidrosis. (See *Hyperidrosis*.) Salicylate of sodium, in five-grain doses, has proved useful in cases depending on nervous excitement.

Bromine Eruption. (See *Dermatitis Medicamentosa*.)

Callositas (*Callos'itas*). Callosities are those hard, thickened, horny patches of skin, of variable size and shape, grayish or yellowish in color, unattended by pain, and which occur for the most part about the hands and feet. They are composed of an increased quantity or growth of the epidermic layer of the skin. They commonly occur at some point where the occupation of the individual gives occasion to unusual pressure and friction, so that in many cases the profession of the patient can be surmised from the locality of the thickening. Occasionally, however, they appear to occur spontaneously.

When the callosity causes pain or inconvenience, it is to be removed by means of local measures. The part should be soaked repeatedly in warm water, or macerated by a water dressing or a poultice, and when it is softened, it may be scraped or pared off, layer by layer, by means of a sharp knife. The plasters of india rubber containing salicylic acid made by Johnson and Johnson are valuable in severe cases.

Cancer of the Skin. (See *Carcinoma*, *Epithelioma* and *Sarcoma*.)

Canities (*Canis'hies*). Graying or whitening of the hair. It may be senile or premature. Premature graying of the hair may occur under a variety of circumstances, and may be partial or universal. It rarely takes place before adult life. Usually when

the hairs have once turned gray they remain so, but sometimes recover their color. Occasionally, the hair is found to turn gray in winter and dark in summer. The hair may turn gray after severe illness, after injuries or diseases of the nerves, or after ligation of the carotid. In one case coming under my care, a woman with red hair lost it almost entirely, from alopecia areata. As the hair began to come back, after some months' treatment, it was at first quite gray, but afterward recovered its color. In a case of lupus erythematosus of the scalp, under my care for several years, the hair, which was absent entirely while the disease was present, began to return as the patient recovered, but instead of being brown as before, was found to be of a dark gray tint. The question as to whether the hair may turn suddenly gray, in a single night, for instance, has been much discussed. I think a sufficient number of authentic cases have been published to prove that this can certainly occur. Internal remedies have no effect in restoring the color of the hair. Dyeing is the only resort.

Carbuncle. Carbuncle is a hard, more or less circumscribed, dark red, painful, deep-seated inflammation of the skin and subcutaneous connective tissue, variable as to size, terminating in a slough. Carbuncle is usually accompanied by a good deal of constitutional disturbance. It is ushered in by a chill followed by fever. The skin over the affected part becomes hot and painful, and a firm, flat, more or less sharply circumscribed inflammation, of a somewhat dusky red hue, forms, which is deeply seated in the tissues. It is painful, with commonly more or less of a burning sensation. The symptoms become gradually more marked during ten days to two weeks, when the tissues begin to break down and soften, and the skin becomes gangrenous. Perforations appear at various points, either filled with tough, yellow, fibrous *cores*, or hollow; and from these issues a yellow, sanious fluid. The surface soon assumes a cribriform or sieve-like appearance, which is very characteristic. Unless the carbuncle is small the whole skin covering it usually sloughs sooner or later, leaving a large open ulcer, healing slowly.

The duration of carbuncle is usually from four to six weeks,

though its course depends somewhat on the age and strength of the patient. It is usually single, and its favorite seats are on the back of the neck, shoulders, back and buttocks. The hairy scalp, the front of the abdomen and the lips are all looked upon as situations of especial danger. Carbuncle attacking the upper lip is believed to be an especially fatal variety. It is apt to be found in young persons, runs an acute and rapid progress and is apt to lead to a fatal result from pyæmia. This form of disease is by some believed to be a variety of malignant pustule. Against this view it may be stated that pain and the presence of pus in considerable quantities are characteristic of this form of disease, while both of these are to a great extent absent in malignant pustule. (Cameron.) It is a serious disease in elderly persons, and when extensive is apt to terminate fatally. Boils are apt to appear about the borders of carbuncle. The affection sometimes occurs in connection with diabetes and Bright's Disease.

The causes are, so far as can be conjectured, similar to those which give rise to furuncles. The disease is not a group of boils, but a much more deeply-seated and serious affection.

Carbuncle is distinguished from furuncle by its size, flatness, multiple points of suppuration and extensive slough. From erysipelas, which it sometimes resembles in its early stages, its circumscribed outline will soon distinguish it.

The general treatment of carbuncle should be strongly supporting. Nourishing food must be freely given, and in some cases stimulants, although sparingly and with caution. The best opinion is opposed to the excessive and indiscriminate use of stimulants formerly customary. Tincture of iron and quinine are the best medicines. The latter should be given in sixteen to twenty-five grain doses once daily. Anodynes should be given freely when required to procure rest at night. Fresh air and exercise, when these can be taken, are important factors. When the carbuncle is tense and hard, poultices and deep, cruciform incisions for relief have the sanction of old usage to recommend them. The majority of cases, however, according to Paget, do equally well without cutting, and this procedure, as well as poul-

ting, are objectionable. Agnew suggests painting cantharidal collodion around the carbuncle in a broad band, the effect of the blister being to remove the tension. Ashhurst strongly recommends compression by means of adhesive strips, as in swelled testicle, applying them first at the margin and gradually bringing them more and more inward, leaving a space at the centre to allow the slough to come out. Among dressings, Hebra recommends cloths wrung out of cold water, or ice bags, in the early stage. Bulkley suggests the following ointment:—

R.	Ext. ergot,	℥ij	
	Pulv. zinci oxidi,	℥ss	
	Ung. aquæ rosæ,	℥ij.	M.

This is to be applied as a protective, spread at least one-eighth of an inch thick. The parts should be kept clean, washed frequently with a weak carbolic acid solution, and the slough removed as rapidly as possible, so as to leave a minimal amount of diseased tissue in contact with the springing granulations. Scraping out the dead tissue thoroughly and afterward packing with an antiseptic, as iodoform, has been recommended, and is, I think, good treatment. When the ulcer begins to granulate it must be encouraged to heal. The prognosis should be extremely guarded. Death may occur from exhaustion, pyæmia, collapse, or, when the scalp is affected, by inflammation and effusion within the cranium.

Carcinoma. The commonest form of cancer of the skin is *epithelioma*, and under this head will be found a description of the various forms of this variety of cancer.

The other varieties of primary or secondary cancer of the skin are the following: 1. *Carcinoma lenticulare* ("scirrhus," "hard," "fibrous" or "connective tissue" cancer); characterized by smooth, glistening, dull pinkish or brownish red, flat or raised papules, tubercles or nodules, from pea to bean, or larger size, disseminate, at first separate, later running together, slow in its course, involving the neighboring glands, causing pain, breaking down, recurring on excision and ending fatally. 2. *Carcinoma tuberosum*; a rare affection, occurring in flat or raised,

rounded or ovalish, tubercular or nodular lesions, from pea to walnut size or larger; firm, hard, deeply imbedded in the skin and the subcutaneous connective tissue, of a dull reddish, brownish red or violaceous color, multiple, disseminated, or irregularly grouped, sooner or later breaking down into ulcers and ending fatally. 3. *Carcinoma melanodes* or *pigmentodes*; beginning in the form of multiple, small, pin-head, pea- or bean-sized, rounded or ovalish, soft or firm papules, tubercles or nodules, of an iron-gray, brownish, bluish black or blackish color, at first discrete, but tending to aggregate into tumor masses, and then to break down and ulcerate, forming often fungous, gangrenous and pul-taceous masses, commonly found starting in a mole or wart on the face or on the hands and feet, usually encountered in early adult or middle life, and pursuing a malignant course. 1068 cases of carcinoma are reported in the 'American Statistics' in a total of 123,746 cases of skin disease observed by dermatologists, being .863 per cent.

The treatment of these forms of cancer, when early seen, is essentially the same as that described under epithelioma and sarcoma. Later they necessarily fall under the care of the surgeon.

Chaps. (See *Eczema, fissum* and *Eczema of Hand*.)

Charbon. (See *Malignant Pustule*.)

Cheiro-pompholyx. (See *Dysidrosis*.)

Chilblain. (See *Dermatitis congelationis*.)

Chloasma (*klo-as'-ma*). Chloasma, sometimes called "melanoderma," is a discoloration of the skin, occurring in variously sized and shaped patches, of a yellowish, brownish or blackish tint. It may occur over a part or over the entire surface, and may be idiopathic, the result of external agencies, as scratching, blistering and heat, or symptomatic. Belonging to the latter category may be mentioned "chloasma uterinum," the pigmentation of Addison's disease, and those discolorations which occur in connection with certain general diseases, as tuberculosis, cancer, malaria, etc.

The most important variety of chloasma is *chloasma uterinum*,

which consists in the presence of one or several patches of pigment deposit, appearing usually about the forehead, extending across from side to side, from below the base of the scalp to just above the eyebrows, in a broken or continuous band. Occasionally the whole face may be covered, as with a mask. The discoloration may also occur elsewhere on the body. The affection occurs between puberty and middle age, is more frequent in married women, and is caused by pregnancy or by uterine derangements. In single women it generally occurs between the ages of thirty and forty, and does not show itself after the climacteric period, either in the single or in the married.

Chloasma is apt to be mistaken for *tinea versicolor*, on account of the similarity in color. The distribution of the disease is, however, quite different (see *Tinea versicolor*), and the presence or absence of the fungus always found in the latter disease on microscopic examination will settle the question. The treatment of chloasma should first be directed to the removal of the cause, when this is possible. Without this all external treatment is apt to be disappointing. The discoloration may be removed from the skin temporarily, by means of certain washes which cause desquamation of the superficial layers of the epidermis. These must be used at first with some caution, to prevent a too severe action upon the skin. The following formulæ may be suggested:—

R. Hydrarg. chlor. corrosiv., gr. vss
 Zinci sulphatis,
 Plumbi subacetatis, aa $\frac{3}{4}$ ss
 Aquæ, f $\frac{3}{4}$ iv. M.

SIG.—Lotion. Apply morning and evening.

Here is a formula recommended by Bulkley:—

R. Hydrarg. chlor. corrosiv., gr. vj
 Acidi acetici diluti, f $\frac{3}{4}$ ij
 Boracis, $\frac{3}{4}$ ij
 Aquæ rosæ, f $\frac{3}{4}$ iv. M.

SIG.—Lotion. To be applied night and morning. At first this may be gently brushed over the affected parts, which may afterward be rubbed well with it. If the skin becomes too scaly, this application should be suspended for a day or two, and sweet cream should be applied.

Recently this ointment has been recommended :—

℞. Hydrarg. pur., gr. c
 Ung. hydrarg.,
 Sevi benzoinati, aa gr. c
 Adipis benzoinati, ad ℥iv. M.

Spread upon muslin and bind on patches at night, or rub in thoroughly with the finger.

During the day the following paste is to be spread thinly over the affected parts :—

℞. Bismuthi oxychloridi,
 Amyli oryzæ,
 Kaolini, aa gr. l
 Glycerinæ amyli, ℥iv. M.

Argyria (*ar-gy'-ria*) is a form of discoloration of the skin occurring after the prolonged use of nitrate of silver. Iodide of potassium, in the average dose, has been employed successfully in two cases of this condition. *Pigmentary mole* is somewhat allied to chloasma. (See *Nævus pigmentosus*.)

Chromidrosis. Chromidrosis is a disorder of the sweat-glands in which the fluid poured forth is variously colored. In the majority of cases the color is bluish or bluish-black. In some cases a brownish or ochre-yellow colored sweat has been observed. In recent years the occurrence of a brick-dust-red deposit upon the skin has been reported in connection with the sweat secretion.

The commonest situation for the occurrence of the dark discoloration is on the lower eyelids. The whole of the face, or any part of it, may be affected, as also any portion of the body and hands. In men the scrotum has been observed to be affected. The majority of persons affected with chromidrosis have been women, usually neurotic, and often the subjects of hysteria. The disease appears in some cases in connection with some nervous shock. It is occasionally feigned. (See *Feigned Eruptions of the Skin*.) These remarks refer to the dark varieties of chromidrosis. Red or orange chromidrosis occurs commonly in the axillæ, although I have seen a case occurring on the cheek, and it may occur on the neck and elsewhere.

The immediate cause of the change of color is not accurately known. The darker varieties are supposed to owe their origin to the presence of indican in the sweat, and some have supposed red chromidrosis to be due to the presence of a parasite. In a marked case of yellow unilateral chromidrosis, reported recently by J. C. White, the coloring matter was very carefully examined by the spectroscope without throwing any light on its nature.

The treatment should be stimulating and astringent. The following ointment will be found useful:—

R. Acid boric,	gr. x	
Acid salicylic,	gr. xv	
Ung. aquæ rosæ,	℥j.	M.

The customary treatment for hyperidrosis will also be found useful in severe cases.

Clavus. Clavus or corn is a small, circumscribed, usually flat, deep-seated, more or less horny formation, painful upon pressure, situated for the most part about the toes. Like the callosity, it is the result of pressure, and this, if continued, may give rise to inflammation. The common seat of the corn is the outer aspect of the little toe and the tops of the toes. Occurring between the latter, the corn is accompanied by more or less maceration, and is known as a “soft” corn. The cause of corns is to be found in ill-fitting or too tight shoes. The growth is made up of a circumscribed, excessive development of the epidermis, and of a central portion or core. The latter extends quite deeply into the tissues, in the form of an inverted cone, the base being directed outward, and appearing on the surface as a rounded spot. The apex of the corn rests on the papillary layer of the corium. The pain attending corns is produced by the core pressing upon the true skin, causing irritation of the nerve filaments of the papillæ.

The first principle in the treatment of corns is the removal of the cause. Tight or badly-fitting shoes must be changed for others or modified in shape. The next point is the removal of the mass of epidermis. The professional chiropodist prefers to do this while the corn is dry, because its limits are better defined.

Most persons, however, will object to the pain this is apt to cause, and I think it better, as a general thing, to first soften the epidermis by means of a poultice, or by covering the corn with a bit of patent lint, soaked in solution of sodium carbonate, and covered with a piece of oil silk or wax paper. The outer layers being thus macerated, may be removed by picking or scraping them with a sharp knife, care being taken not to penetrate and wound the sensitive tissues. The corn should be protected from pressure by a plaster, as the "emплаstrum fuscum":—

R. Plumbi oxidi rubri, ℥iv
 Olei olivarum, f℥j
 Cere flavae, ℥ij
 Pulv. camphoræ, gr. x. M.

Boil the lead oxide and the oil together until a brownish-black mass is formed; then add the other ingredients, while still hot.

The following is the formula of a favorite remedy of late years:—

R. Acid salicylic, ℥iss
 Ext. cannabis indicæ, gr. x
 Collodii, ad ℥j. M.

SIG.—Paint on daily with a brush and scrape off with a sharp knife.

Or diachylon plasters may be used. They should be spread upon soft leather or chamois, and have a hole cut in the centre. The corn plasters in felt, of ring shape, which may be procured in the shops, answer an excellent purpose. The salicylic rubber plasters now made in this country are perhaps the best form of plaster, however. Corns which have become inflamed must be cared for assiduously, or they are likely to give much trouble. Perfect rest, for a time at least, is required in these cases, and some soothing application. Poultices of bread crumbs and dilute lead water, applied cold, exercise a powerful sedative action. Soft corns are best treated by excision, when this is possible. Nitrate of silver in solid stick, glacial acetic acid, flexible collodion, powdered oxide of zinc or tannic acid, are all useful. The toes should be separated by a thin layer of raw cotton.

Colloid Degeneration of the Skin. This extremely rare affection is characterized by the appearance in the skin of numer-

ous small tumors—rounded, flat or raised—the size of a pin's head to a split pea, of a pale or lemon color, bright, shining and translucent. They look like vesicles, but when pricked are found to be firm, or to exude a little blood and transparent gelatinous fluid. The process is a colloid degeneration of the connective tissue of the corium. The lesions have been observed on the cornea and the septum nasi.

Comedo (*kōm-ē-do*). Comedo is a disorder of the sebaceous glands, characterized by yellowish or whitish, pin-head size elevations, containing in their centre blackish points. It is observed chiefly about the face, neck, chest and back. Each single elevation is called a comedo (plural comedones). The common name, "flesh worms" or "grubs," is calculated to convey the erroneous idea that the small inspissated plug of altered sebum which can be expressed from the follicle is a parasitic worm. It is true that a little mite, the microscopic *Acarus* or *Demodex folliculorum*, is occasionally found in the mass (see *Acarus folliculorum*), but this cannot be regarded as in any way essentially connected with the disease. Its presence is merely fortuitous and without significance, the plug consisting of altered sebaceous matter, mingled with epithelial cells. The affection, though comparatively trifling, and without subjective symptoms, is often extremely annoying to patients. It is due in part to idiosyncrasy, in part to a general sluggish performance, not only of the functions of the skin, but also of those of the whole body. Patients are apt to suffer from dyspepsia and with constipation. In young women chlorosis and menstrual difficulties are apt to be present. The disease is preëminently one of the period of puberty; patients seeking relief from this complaint are almost invariably young men and young women, although the disease may occur in infants and young children.

Local treatment suffices in most cases to relieve the condition. Frequent bathing of the affected surface with hot water will aid the process of removal. Stimulating ointments, especially such as contain sulphur, are useful, as the following :—

R. Sulphur. præcipitat., $\mathfrak{z}\text{ij}$
 Ung. aquæ rosæ, $\mathfrak{z}\text{j}$. M.
 SIG.—To be rubbed in at night.

Sulphur lotions, such as those given under the head of acne, may also be useful. Should the skin tend to become harsh under the use of these remedies, weak alkaline ointments may be used for a time, as this:—

R. Sodii biborat., $\mathfrak{z}\text{ss}$
 Glycerinæ, $\mathfrak{m}\text{xvj}$
 Ung. aq. rosæ, $\mathfrak{z}\text{j}$. M.

An excellent application is the following:—

R. Aceti., $\mathfrak{z}\text{ij}$
 Glycerinæ, $\mathfrak{z}\text{ij}$
 Kaolini, $\mathfrak{z}\text{iv}$. M.

This forms a soft paste, which is to be spread over the surface at night, and, if possible, in the morning also. If applied on the face, the eyes should be kept shut, on account of the pungency of the vinegar. It loosens and dislodges the sebaceous plugs more satisfactorily than any other preparation with which I am acquainted. A watch-key may be employed to press out the comedones, the end being gently but firmly pressed down over the sebaceous plug. Should this not yield readily, the point of a fine needle may be run into the follicle, alongside of the comedo, and then moved around, so as to loosen and detach the plug from its surrounding wall. Care should be taken not to use too much force, for fear of inflaming the skin. If the comedo plug does not come out easily, it should be left for another time. It must be remembered that so long as the condition which produces comedo is present and effective, the comedones are apt to be reproduced. Several in succession may have to be removed from the same glandular opening.

Occasionally the contents of the sebaceous follicles become even more condensed and hardened than above described. The firm, almost horn-like plugs are gradually forced out of the mouth of the follicles, until they may stand up stiffly above the surface of the skin. Such a case came under my notice some years

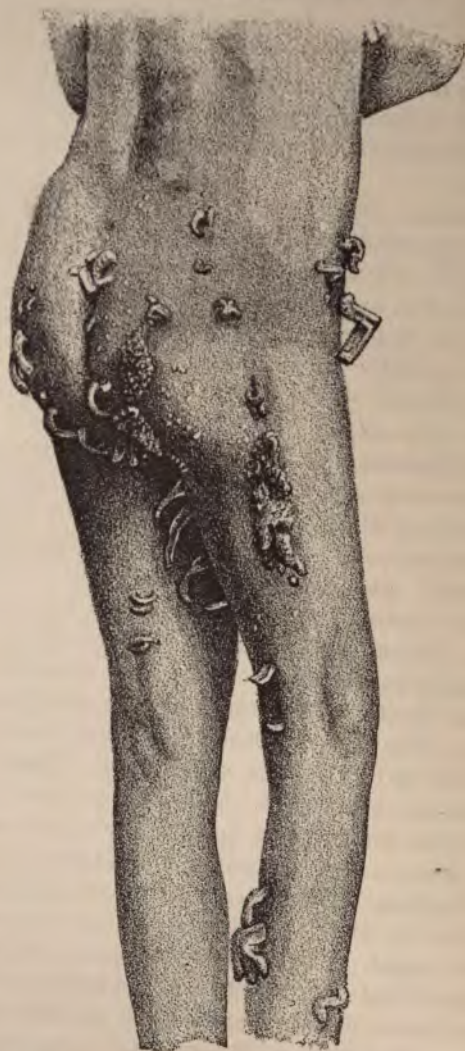
ago, the skin of the trunk, particularly over the shoulders, being the seat of the disease. The hardened sebaceous plugs, in great numbers, projected to the height of an eighth to a quarter of an inch, giving the surface of the skin a nutmeg-grater appearance, viewed from a little distance. Hot baths, frictions with *sapo viridis* and inunction of officinal sulphur ointment, may be used in such cases.

Condyloma. (See *Verruca*.) The name of "condyloma lata," or "flat condyloma," has sometimes been given to the moist syphilitic papule. This term leads to confusion, and has been dropped by most modern writers. There is but one condyloma, which has nothing syphilitic about it, although it may occur on a syphilitic patient, just as he might have an ordinary wart on the finger.

Corns. (See *Clavus*.)

Cornu Cutaneum. Cutaneous horns are hypertrophic growths or excrescences of the skin, which, when fully developed, differ slightly, if at all, in structure, from those found normally in the lower animals. They are solid, hard, dry and wrinkled, or laminated. In form the growth is usually elongated and roundish or conical; sometimes it assumes a flattened or button-like form. The horn is often twisted and misshapen. The color varies through gray to black, or it may be yellowish or brownish. Horns may be of any size from that of a pin's head to that of the finger. The base is concave or flattened, and rises from the skin, which may be normal or inflamed. Horns are usually single, but may be multiple. They may occur upon any part of the body, but are common upon the face. A case has been reported where a horn of considerable size grew from the foreskin of the penis. Though commonly occurring upon elderly people, they are also found in the young. They are painless when not injured, and grow slowly, dropping off at times when they have reached considerable size, and leaving behind a shallow ulcer from which the horn is again reproduced. They are rare among skin diseases, but 42 cases being reported in the 123,786 of the American statistics.

FIG. 1.

CORNU CUTANEUM. (KERATOSIS.) *After Bätge.*

The treatment of cutaneous horn is simple. The growth is to be twisted or cut out, and the base cauterized with caustic potassa or chloride of zinc, to prevent its reproduction.

Crab Louse. (See *Pediculosis pubis*.)

Crusta Lactea. (See *Eczema*.)

Cutis Anserina. (See *Goose Skin*.)

Cyst. (See *Sebaceous Cyst*.)

Cysticerci of the Skin. (*Sis'-fi-ser-sēe*.) Several cases have been reported in which these parasites have become encysted in or under the skin. The affection is characterized by the presence of a number of tumors, of pea to hazel-nut size, rounded or oval in outline, smooth and firm. They are not usually painful on pressure, and having attained a certain size they may remain unchanged for years, new tumors arising from time to time in some cases.

The tumors caused by the presence of cysticerci in the skin may be mistaken for *lipoma*, *carcinoma*, *sarcoma*, *molluscum epitheliale*, *sebaceous cyst*, or *syphilitic tumors*. Microscopic examination reveals the presence of the parasite.

Dandruff. (See *Pityriasis capitis*.)

Dermatalgia. (*Dermatal-ia*.) An affection or rather a condition of the skin, characterized by the sensations of burning, stinging, darting, boring, or a feeling as if the surface were raw. The suffering may vary from mere discomfort to agony. While the surface of the skin remains quite unaltered in appearance, unless applications have been made, the slightest touch may cause extreme pain. This hyperæsthesia may, however, be relieved at times by firm pressure. The area affected may vary in extent or in position. Usually only a small patch is affected at any one time. At times, however, there may be several painful areas, and in rare cases the entire surface may be involved.

The disease is one of middle life, and may occur in the male or female, and is by no means confined to hysterical or nervous individuals. The cause is often extremely difficult or impossible to determine. It has at times been called rheumatism of the

skin. It is often a pure neuralgia, the result of anæmia, chlorosis, malaria, etc.

The diagnosis must be made between dermatalgia and the deeper-seated, painful affections resembling it, as ordinary neuralgia, muscular rheumatism, etc. It must be remembered that the painful sensations are very superficial in well-defined areas of the skin itself, and not deep seated, as in the other affections.

The treatment of dermatalgia must be general and directed to the patient's constitutional condition. The rheumatic or gouty condition, if present, must be combatted, anæmia, chlorosis, digestive and uterine disorders; in fact, whatever condition is likely to arouse reflex nerve irritability must be inquired after and, if present, treated. The local treatment is not very successful, but, of course, all means must be tried. Galvanism, the application of a blister to the part, morphia, and other sedatives, may be applied. Tincture of aconite pure, with caution, or diluted, seems likely to give relief. This should be firmly bound to the part, for firm support by bandages seems itself to assuage the pain.

Dermatitis. (*Dermat-itis*.) Under this term those inflammations of the skin induced by local influences, as wounds, toxic agents, heat, and cold, are here to be considered. The various other affections to which the name dermatitis has been given, will be found under specific heads further on.

Traumatic dermatitis is that form of inflammation of the skin which is produced by mechanical agencies, as bruises, abrasions, etc., which need not at present be considered further.

Dermatitis venenata includes the various eruptions produced by toxic agents. Chief among these is the inflammation caused by contact with poisonous plants, of which the poison ivy and the poison oak are best known. The first of these plants, known to botanists as *rhus venenata*, is a climbing, ivy-like plant, which is usually seen climbing about walls and fences, or running up trees to a considerable height, supporting itself by lateral rootlets. The leaves are ternate, and grow on long, semi-cylindrical petioles. Leaflets (three) ovate or rhomboidal, acute, smooth,

and shining on both sides, the veins sometimes a little hairy beneath. The margin is sometimes entire, and sometimes variously toothed and lobed in the same plant. The flowers are small and greenish-white. They grow in panicles or compound racemes on the sides of the new shoots, and are chiefly axillary. The berries are roundish and of a pale green color, approaching to white. The poison ivy is apt to be mistaken for the Virginia creeper, especially in autumn, when the brilliancy of its foliage makes it fatally attractive to the unsophisticated collector of leaves. It should be remembered that the Virginia creeper has five leaves on the stalk, while the poison vine has but three. The leaves of the latter also vary greatly in form.

The poison oak, or *rhus toxicodendron*, is a decidedly rare plant, and is usually found growing in unfrequented swamps, where its fine smooth leaves give it the air of a tropical shrub or tree. The trunk is one to five inches in diameter, branching at the top, and covered with a pale grayish bark. The ends of the young shoots and petioles are usually of a fine red color. The leaves are pinnate, the leaflets one to thirteen in number. The flowers are small and green in axillary panicles. The fruit grows in the form of a bunch of dried greenish-white berries, sometimes marked with slight purplish veins, and becoming wrinkled when old. The poison oak is apt to be mistaken for elder or sumach. The leaves of the latter, however, have serrated edges, and the tips are pointed.

The poisonous qualities of the *rhus toxicodendron* and the *rhus venenata* are due to a volatile acid called toxicodendric acid.

The effect varies greatly with the individual. Some persons are so susceptible that they cannot pass to the windward of the vines, or be exposed to the smoke from their burning without suffering severely, while others can handle them with impunity. The severity of the eruption may also vary from the production of a few vesicles to a very severe eruption, and even death is said to have been caused in two reported cases.

As regards the symptoms of this form of dermatitis, there is

first a period of incubation varying from a few hours to several days. In children fretfulness and slight fever may precede the outbreak of the eruption. The first local symptoms are burning, heat, and itching, usually observed on the face and hands, as these are the most exposed parts. The surface becomes reddened, with occasional livid spots, and the cellular tissue in the vicinity becomes œdematous. About this time the characteristic vesicles begin to appear, usually first of all between the fingers. The next locality involved, in males especially, is usually the genitals. From here the eruption may spread to other parts of the body.

When the eruption is at its height, the surfaces involved are of a lurid red color, more or less œdematous, occupied by patches of papules and vesicles, the latter often confluent, with frequent excoriations exuding a clear yellow fluid, which gums on linen, and dries into a soft crust. The eyes are often closed from swelling of the eyelids, while the nose, lips and ears are swelled, and drip with serum. The genitals are often enormously tumefied, and in the most aggravated cases there may be such excessive general œdema that the patient may be rendered actually helpless. In the more marked cases there is sometimes a slight febrile reaction, with coated tongue and constipated bowels. General symptoms are absent, however, in mild cases. The subjective sensations are usually itching and burning in the affected parts. In severer cases this may be intensified to a burning, stinging heat, and the torture may be so great as to deprive the patient of sleep, and require the administration of narcotics. The eruption remains at its height for several days, but by the end of a week the acute symptoms have usually subsided, though a few stray lesions sometimes continue to appear.

The diagnosis of rhus poisoning is usually made without difficulty, because a history of exposure to the poison vine or oak may almost always be obtained. In addition, the localities attacked are characteristic. The vesicles are usually first found between the fingers, where the skin is thin, then on the dorsal surface of the fingers and hands, and last on the thickened skin

of the palms. The eruption is more scattered than that of eczema, with which affection it is most liable to be confounded, and the vesicles are usually developed as such, springing often directly from the skin, without going through the preliminary condition of papules as is usually observed in eczema.

Dermatitis venenata is not, strictly speaking, contagious. In recent cases the poison can be conveyed from one person to another, or from one part to another, by simple contact of the surface. Thus, the penis may be handled in micturition immediately after handling the poison vine, and thus this locality is very apt to be attacked.* But, on the other hand, experiments in inoculation of the serous fluid from vesicles or bullæ have in every case resulted negatively.

Eczema is very apt to occur as an immediate sequel to dermatitis venenata, but the latter disease does not predispose to eruptions of any kind as a remote result of its influence upon the system. White thinks that there is no evidence of a continuance or renewal of the operation of the poison after its primary impression on the skin has exhausted itself, and therefore the accounts which we have of yearly recurring attacks of dermatitis venenata indicate renewed exposure, and not spontaneous periodical exacerbation of poisonous influence.

A multitude of remedies have been and are yearly suggested for the relief of rhus poisoning, some of which are effectual,

*Dr. White cites a case where a servant boy, being insusceptible of poison by ivy, had been employed in pulling up all the vines of that plant found growing in the grounds about a country house. When his task was finished he was made to wash his hands thoroughly with hot water and soap, and afterward with vinegar. In the afternoon this boy took a child of six years, belonging to the family, to bathe in a pond. Having stripped the child he immersed him, holding him with his hands under the armpits, and afterward rubbed his back with his open palms.

After two or three days the child was taken ill, and grew rapidly worse. Deep ulcers made their appearance under the armpits, and the skin of the back exhibited in aggravated form the usual marks of poisoning by ivy. He died at the end of the third week of his sickness.

while others have appeared to prove successful merely because the affection, running a spontaneous course toward recovery, has gotten well while they have been in use.

In my experience the use of black wash, in the form of cloths kept wet with the wash and in constant contact with the skin, is one of the most useful remedies. White suggests that it should not be used over extensive surfaces for fear of absorption. He recommends the following :—

R. Pulv. zinci ox., ℥ iv
 Acid. carbolic., ℥ j
 Aquæ calcis, Oj. M.

This, after being shaken, is sopped over the affected parts freely and repeatedly through the day and by night as well, so often as the patient is waked by the intense itching and burning which characterize the inflammation in its early stages. It may be applied over the whole surface of the body and for any length of time with safety, and is generally well borne at any stage of the disease.

At night the following ointment may be used instead of a wash, remembering not to employ it over a very great area at any one time :—

R. Hydrarg. chlor. mitis., gr. x
 Acid. carbolic., gr. x-xx
 Ung. aquæ rosæ ℥ j. M.

Decoction of white oak bark is also useful. The following, recommended by Hardaway, of St. Louis, has done me good service :—

R. Zinci sulphat., ℥ j
 Aquæ, Oj. M.

SIG.—Apply on cloths every hour through the day, and several times during the night.

A remedy which I have used with great satisfaction is the fluid extract of *grindelia robusta* :—

R. Ext. *grindeliæ robustæ*, fluid., f℥ ij-iv
 Aquæ, Oj. M.

This is to be applied to the affected parts on cloths, which are

to be thoroughly wet with the solution and then allowed to dry almost completely upon the skin, removing them when nearly dry and renewing the application, but not keeping the cloths constantly sopping wet, as with other sedative and astringent lotions.

Astringent powders may also, at times, find appropriate place, as on the face, when the patient is obliged to go about and cannot keep wet cloths, etc., applied. The following may be mentioned :—

R. Pulvis zinci carb. præcip.,
Amyli oryzæ, aa ʒj. M.

Or this :—

R. Magnesii carbonatis levis,
Pulveris lycopodii, aa ʒ ss. M.

Where constipation exists, it is well to give a purgative at the beginning of the treatment. No other internal treatment is required.

The prognosis of this form of dermatitis is of course favorable, although the occurrence of successive crops of eruption may delay the cure for some weeks.

Various other plants are mentioned by Dr. J. C. White, in his very complete monograph on "Dermatitis Venenata," as known or believed to exercise an irritant and poisonous action on the skin. Among these, which are very numerous, the best known are the following: *Cashew nut*, *Indian turnip*, *Skunk cabbage*, the *Upas* of Java, cultivated at times in our gardens, *Bitter orange*, *Catalpa*, *Arnica Montana* (not the American *Arnica*), *Flea-bane*, *Burdock*, *Euphorbia*, *Manchineel* of Florida, *Mucuna pruriens* or *Cowhage*, *Flax?* *Bayberry* (employed in making cheap "Bay rum"), *Poke*, *Smartweed*, *Wood anemone*, *Clematis*, *Larkspur*, *Buttercup*, *Ipecac*, *Cinchona* and *Quinine*, *Balm of Gilead*, *Mesereon*, *Thapsia*, *Nettle*, etc.

Of inorganic substances which may give rise to dermatitis are *Paraffin*, *Petroleum*, *Common or Sea Salt*, *Bichromate of potassium* and *Aniline dyes*. In addition, a number of drugs may

produce the same condition. Some, if not all, of these will be found mentioned below under *Dermatitis Medicamentosa*. Of the animal kingdom, mention may be made of the lower forms of marine life—*Hydroa*, *Medusæ*, *Polyps*, etc.—of which the best known are the *Portuguese Man-of-war*, the *Jelly fishes* generally and *Sea urchins*. The commoner animal parasites will be found mentioned under their various names, or that of the diseases they produce, as *Bedbug*, *Scabies*, *Pediculosis*, etc. The scope of this work is not sufficiently extensive to treat of these subjects, but I have thought well to mention them as suggesting a possible origin for some obscure forms of irritation of the skin which the practitioner is liable to encounter. Reference may be made to the monographs of White, Piffard and Morrow for fuller details.

Advantage is sometimes taken by malingerers and hysterical persons of the known action of the agents mentioned above to produce artificial eruptions. (See *Feigned Eruptions*.)

Dermatitis Congelationis. "Chilblain." The inflammations of the skin produced by cold resemble in many respects those produced by heat, only, unlike burns, their course is slow. In addition, a certain morbid predisposition on the part of the patient is a necessary condition of their occurrence. The occurrence of chilblains does not necessarily depend on the influence of extreme cold; indeed, the affection is commoner in hot than in cold countries, and may occur at a temperature not below 32° F. Anæmic and chlorotic persons are more apt to be the subjects of the affection.

The erythematous form of chilblain shows itself in the form of circumscribed patches, of a livid red color and somewhat tubercular character, the color disappearing under pressure of the finger. The lesions itch and burn painfully. They occur, most commonly upon the fingers and toes, but may appear also on the ears, nose, or other parts of the face, or, indeed, on any part of the body which is exposed to cold. Their course is essentially chronic; usually they do not change in appearance, but sometimes become hard and infiltrated, while at other times, under the influence of pressure or rubbing, as of the shoe, or of

scratching, a bleb or pustule forms. The pain is then considerably increased, especially when the bulla or pustule bursts and leaves an ulcer. These changes, however, frequently lead to the cure of the affection, which might otherwise have lingered on indefinitely.

The bullous form of chilblain is formed under the influence of a more intense degree of cold, and is characterized by the formation of watery or sero-sanguinolent blebs, the size of hazelnuts or goose-eggs. If they are not punctured they undergo no change for some time, but at last break, after having effected considerable destruction of tissue, the bones even of the feet and hands being in extreme cases occasionally laid bare and exfoliating.

The escharotic chilblain is a still more extreme degree of the same process, sloughs forming, which may be cast off without further effect, or which may poison the blood with fatal result.

The treatment of chilblain is, first of all, in the way of prevention. A sufferer from this disease must not expect to be cured while continuing to expose himself to the influences which produced it. Warm and sufficient clothing, protection of the hands and feet, and in cases where the general system is below par, such medication and hygiene as will improve this condition; such are the points to which attention must first be paid. In mild acute chilblain, rest, in the horizontal position, frictions with cold water or snow, and astringent sedative lotions, as lead water, lotion of *grindelia robusta* (see *Dermatitis venenata*), or opiate washes, may be prescribed. In the more chronic forms of erythematous chilblain stimulant applications are called for. When unbroken the lesions may be painted with tincture of iodine, or better, with oil of peppermint, pure or mixed with one to six parts of glycerine. The following pigment is convenient of application:—

R. Tinct. iodini, ℥j
 Ætheris, f ʒ iiss
 Collodii, f ʒ j. M.

Sig.—Apply with a camel's-hair brush.

When the lesions are broken, or in any case, the following forms an excellent application :—

R. Terebinth. Venetian, ℥ iij
 Ol. ricini, f ℥ iss
 Collodii, f ℥ viiss. M.

SIG.—Apply with a brush as often as required to shield the chilblain from the air.

The following ointment may also be employed :—

R. Plumbi acetat., ℥ iiss
 Ol. rapi (Colza), f ℥ j
 Vitel. ovi., j
 Cere flavæ, ℥ iss. M.

Liniment of aconite may be used, but with caution.

Carbolized cosmoline relieves the burning and itching.

The severer forms of dermatitis from cold belong rather to the province of the surgeon than the physician. When operative interference is not demanded, they are to be treated in a similar manner to burns of the like gravity.

Dermatitis Calorica. This subdivision includes the inflammatory symptoms produced by heat, in the form of burns. The treatment of such lesions ordinarily comes under the management of the surgeon, and need not therefore be referred to further.

Dermatitis Gangrenosa is a rare affection which has chiefly come into notice during the past few years, through a number of reports of cases published in the medical journals. It may be idiopathic or symptomatic. The idiopathic form is apt to occur symmetrically. It usually begins in the form of small or large, circular, erythematous, reddish or purplish spots, which may be tender and painful, or without sensation; after undergoing a more or less variable course they become gangrenous and slough, the process terminating fatally or in recovery; the latter event taking place sometimes in the gravest cases. There is usually some constitutional disturbance, fever, malaise debility, etc. Gangrenous patches may follow nerve lesions, or may occur, also, in connection with grave cerebral or spinal diseases, as in

the form of acute bed-sore, or in connection with diabetes (see *Diabetes, Skin Diseases in.*) These form the symptomatic form of gangrene. I have seen a case where a man who had recently suffered amputation of a leg, for a railroad accident, showed, within a week, lesions over the knuckles and on the right forearm, resembling at first a bullous erythema, and changing later to black sloughs, which were finally thrown off by ulceration.

In all cases of gangrene of the skin, and the like, care should be taken to exclude artificial and feigned diseases.

Dermatitis Exfoliativa of Infants. (See also *Pityriasis Rubra.*) Under the designation of *exfoliative dermatitis of infants at the breast*, Ritter von Rittershain describes a disorder of a serious character which makes its appearance from the second to the fifth week of life, with the following symptoms: At first, dryness of the skin with slight desquamation, and redness of the lower part of the face, with fissures at the angles of the mouth. The mucous membrane of the latter becomes hyperæmic and the seat of large irregular erosions covered with a thin grayish layer. Meanwhile the child remains well nourished and shows no elevation of temperature. Later, the redness extends over the whole body, and crusts form on the lower part of the face, under which the skin becomes deeply fissured. The epidermis over the whole body is thickened and lifted up from the cutis by a thin layer of fluid exudation. The epidermis is soon thrown off in large masses, leaving the exposed cutis of a dark red color, presenting an appearance like that of an extensive burn. The hands and feet are particularly affected, and here the epidermis peels off in great flakes. Several varieties of the affection in its early stages have been observed. Sometimes miliary vesicles are seen on the forehead, extending to the scalp. In other cases the eruption resembles an eczema; in a third class of cases it is like pemphigus. Desiccation takes place sometimes within twenty-four to thirty-six hours. In exceptional cases the skin continues dry throughout the whole course of the disease, becoming fissured and presenting a parchment-like dryness. In these cases the whole surface is not involved. All of these changes take place

within a week. Later, slight desquamation occurs, often accompanied by eczema, furuncles, and abscesses, with at times extensive phlegmonous infiltration, gangrene, and death from intercurrent pneumonia, colliquative diarrhœa, etc. Fifty per cent. of the 274 cases observed by Ritter died. The existence of the disease as an independent affection has been denied, but Caspary has recently corroborated Ritter's statements.

Dermatitis Scarlatiniforme. Rare cases of scarlatiniform and similar forms of dermatitis, involving the whole or portions of the surface, have been described by various writers. Some of these appear to be connected with septic infection, childbirth, etc. They are so rare and illy defined that I do not think it desirable in the present state of our knowledge to do more than record the possibility of their occurrence.

Dermatitis Herpetiformis. Under this designation the disease described by writers under the name of "impetigo herpetiformis" and "herpes gestationis" is to be understood, as well as numerous cases reported as "pemphigus," "herpes pruriginosus," "hydroa," etc. The name *dermatitis herpetiformis*, recently given by Duhring, who has published a number of papers bearing upon the subject, seems to me to better describe this disease than any other name thus far chosen.

Dermatitis herpetiformis may be defined as a chronic multi-form skin affection, characterized by successive outbreaks in which the eruption may be at one time herpetiform and vesicular, at another pustular, while in other instances, or at other periods in the history of a given case, wheal-like lesions or bullæ may predominate. The lesions tend to assume a circinate arrangement, and severe and intolerable itching, with more or less constitutional disturbance, is a common accompaniment.

In severe cases prodromal symptoms are usually present for several days preceding the cutaneous outbreak; they consist of malaise, constipation, febrile disturbance, chilliness, heat, or alternate hot and cold sensations. Itching is also generally present for several days before any sign of efflorescence shows itself. Even in mild cases slight systemic disorder may precede

or exist with the outbreak. This latter may be gradual or sudden in its advent and development. Not infrequently it is sudden, one or another manifestation breaking out over the greater part of the general surface, diffusely or in patches, in the course of a few days, accompanied by severe itching or burning.

A single variety, as, for example, the erythematous or the vesicular, may appear, or several forms of lesion may exist simultaneously, constituting what may very properly be designated the multiform variety. The tendency is, in almost every instance observed by Duhring, to multiformity, and my experience coincides with this. There is, moreover, in many cases, a distinct disposition for one variety, sooner or later, to pass into some other variety; thus, for the vesicular or pustular to become bullous, and *vice versa*. This change of type may take place during the course of an attack, or on the occasion of a relapse, or, as is often the case, it may not show itself until months or years afterward. Not only multiformity of lesion, but irregularity in the course of development is, it may be repeated, the rule. Itching, burning, or pricking sensations almost always exist. When the eruption is profuse, they are intense, and cause the greatest suffering. They become more violent before and with each outbreak, abating in a measure only with the laceration or rupture of the lesions. The disease is rare, but of more frequent occurrence than was formerly supposed to be the case. Duhring's fifteen cases were adults, including both sexes in about equal proportions. I have met with a number of cases, including one in a boy of twelve. The disease process is in almost all instances chronic, and is characterized by more or less distinctly marked exacerbations or relapses, occurring at intervals of weeks or months. The disposition of the eruption to appear in successive crops, sometimes slight, at other times severe, is peculiar. Relapses are the rule, the disease in most cases extending over years, pursuing an obstinate, emphatically chronic course. All regions are liable to invasion, including both flexor and extensor surfaces, the face and scalp, elbows and knees, and palms and

soles. Excoriations and pigmentation, diffuse and in localized areas, are in old cases always at hand in a marked degree. The pigmentation is usually of a mottled, dirty yellowish, or brownish hue, and is persistent. The diagnosis is at times difficult, the affection being liable to be mistaken for *pemphigus*, *herpes*, *erythema multiforme* and *eczema*. The following table will aid in the differential diagnosis.

DIFFERENTIAL DIAGNOSIS

BETWEEN

DERMATITIS HERPETIFORMIS.

1. Lesions multiform but chiefly vesicular, pustular and bullous or urticaria-form, separate, combined or alternating in different attacks.
2. Lesions generally in groups, often taking on a circinate appearance.
3. Patches of eruption frequently spread by the formation of encircling groups of new vesicles or bullæ, while the central lesions dry up.
4. Intense itching and burning.
5. Bullæ may arise directly from the skin, or at times may be situated upon an urticaria-like base.
6. Individual lesions last a week or more.
7. Bullæ not usually larger than a split pea, unless several unite. Tend to have a stellate outline.

DERMATITIS HERPETIFORMIS.

1. Blebs, vesicles and pustules may occur together.
2. Area involved extensive.
3. May occur on hands and wrists.
4. Lesions numerous.

PEMPHIGUS.

1. Lesions consist of blebs or bullæ.
2. Little tendency to group.
3. No tendency to spread peripherally.
4. Slight subjective symptoms.
5. Bullæ rise directly from surface of healthy skin.
6. Blebs disappear in two or three days.
7. Blebs usually larger and commonly rounded.

HERPES.

1. Lesions distinctly vesicular.
2. Usually limited in area.
3. Rare on extremities.
4. Lesions few in number.

DERMATITIS HERPETIFORMIS.

5. Runs a chronic course.
6. Itching intense.
7. Presence of large blebs due to coalescence of several smaller lesions.

DERMATITIS HERPETIFORMIS.

1. Lesion multiform, but principally vesicular or bullous.
2. May occur upon any part of the body.
3. Color of base of lesions a scarlet red.
4. Disease runs a chronic course.
5. Subjective sensations (itching) severe.
6. Erythematous lesions slightly raised, apt to have an indefinite outline.
7. Lesions pass slowly through several stages of development.
8. Lesions usually arranged asymmetrically.

DERMATITIS HERPETIFORMIS.

1. Lesions markedly herpetic in type, *i. e.*, consisting of discrete vesicles showing no tendency to break open and coalesce.
2. Lesions rise direct from the skin or from an urticaria-form base.
3. Intense itching, allayed only by opening the vesicles or bullæ, or more commonly rebellious to all treatment.
4. Extremely refractory to treatment.

HERPES.

5. Runs an acute course.
6. Burning, but only slight itching.
7. Blebs small, if present.

ERYTHEMA MULTIFORME.

1. Lesion multiform, but principally macular, papular or tubercular.
2. Most frequent by far upon the extensor surface of the forearms and hands and legs and feet.
3. Color of lesions a highly characteristic, dusky, raspberry red.
4. Disease does not usually last over three or four weeks.
5. Subjective sensations rarely marked.
6. Erythematous lesions markedly raised and sharply defined.
7. Lesions, though multiple, do not change in character.
8. Lesions usually symmetrical in arrangement.

ECZEMA.

1. Vesicular lesions not herpetic, tend to run together and break open readily. Other forms of disease, *E. rubrum*, *E. squamosum*, etc., usually concomitant.
2. Vesicles usually have an inflammatory base, extending irregularly about them and forming a reddish patch.
3. Itching not usually affected by opening the vesicles, but allayed by the application of anti-pruritics.
4. Usually yields to appropriate treatment.

Treatment has, as yet, proved of little avail in retarding or checking the course of the disease, or modifying it in any way. The general health, which is frequently impaired, or which, in severe cases, may be broken down by suffering and sleeplessness, is to be improved by tonics, diet, etc. Strychnia with quinine, and with or without the addition of arsenious acid, in doses of $\frac{1}{30}$ grain, has been found useful in this respect.

Soothing ointments, as the unguentum diachyli of Hebra, may be employed, or the following :—

R.	Bismuthi oxidi,	ʒj
	Acidi oleici,	ʒj
	Ceræ albæ,	ʒiij
	Vaselini,	ʒix
	Ol. rosæ,	ʒiij. M.

Washes are usually more grateful to the skin than ointments in this disease, and are required to soothe the often severe itching and irritation of the skin. The following is a convenient formula :—

R.	Acid. carbolic.,	ʒiij
	Glycerinæ,	fʒj
	Aquæ, ad.	Oj. M.

The prognosis in dermatitis herpetiformis should be guarded. Some cases appear to get well after months or years, but others persist. Relapses are not uncommon. The form observed in connection with gestation usually gets well more rapidly. That observed abroad by Hebra and Kaposi appears to be malignant, all or almost all of the cases ending fatally, which, it is believed, has very rarely been the result in any of the cases reported in this country.

Dermatitis, Malignant Papillary, sometimes called "Paget's disease of the nipple," is a malignant disease of the nipple and adjacent structures, at first closely resembling eczema. The disease begins with roughness, redness, and scaling about the centre of the nipple, with occasional slight oozing or crusting, and, in some cases, the formation of a fissure. The process goes slowly on, presenting to all appearance the symptoms of eczema with intense itching, in many cases the

nipple becoming retracted and finally melting away. When fully developed a considerable portion of the breast may be covered by the red, infiltrated, weeping patch, which is slightly sunken at the sharply defined edge below the level of the surrounding skin, and presents a peculiar livid crimson, different in tint from the bright red of eczema rubrum. Taken between the fingers the infiltration of the skin does not extend as deeply as would be thought from the appearance of the disease. The points just given, together with the fact that the infiltration is firmer than that observed in eczema, and that the surface exudes a serous fluid without much discharge, crusting, vesiculation, etc., will serve to distinguish the disease from eczema of the nipple, with which it is very apt to be confounded. Any eczema of the nipple should, however, be viewed with suspicion, above all if chronic in character, tending to spread slowly and steadily, and with more or less progressive retraction of the nipple.

Malignant papillary dermatitis is actually or potentially a carcinoma, and should be treated as such. In the earlier stages destruction by scraping or cauterizing may be practiced with some hope of success, but once established the only treatment is complete excision of the part involved, or even ablation of the entire gland.

Dermatitis Medicamentosa. Drug eruptions are those produced by the ingestion of substances ordinarily used as medicines. These must be taken up into the system to produce the effects here understood. The direct irritative effects caused by the application of drugs to the surface are described under the head of *Dermatitis venenata*.

Some drugs, as iodine and its salts, will produce eruptions in almost any individual if taken in considerable quantity or for a sufficient length of time; others, as quinine, only produce an effect in persons having a peculiar idiosyncrasy toward the drug. The following drugs have been known to produce eruptions upon the skin as a result of their ingestion: *Arsenic, antipyrine, belladonna and atropia, bitter almonds, bromine, borax, cannabis indica, chloral, copaiba, cubebs, digitalis, duboisia, hyoscyamus,*

iodine, iodoform, mercury, opium, pilocarpine, phosphoric acid, quinine, salicylic acid, santonine, tar and its derivatives and congeners, turpentine, carbolic acid, creasote, rosin, and petroleum.

The eruptions produced by these drugs are generally limited to a few pretty well-defined groups, and bear a family resemblance to one another. Erythematous, scarlatiniform, and urticarial rashes are usually met with. Less frequently, pustular, bullar, purpuric, or nodular eruptions are encountered. There is nothing about the appearance of these eruptions which is so characteristic that the drug causing it can be pointed out in any given case. We are able, however, in most instances, to designate an eruption as due to the effect of some drug, because, while resembling closely some other eruption in its lesions, the drug eruption is always different in some well-defined symptom. It may be too profuse, or it may be accompanied or unaccompanied by fever, contrary to the usual rule, or the lesions may occur in some unusual place and run a peculiar course. These points will be developed further in describing the eruptions produced by the individual drugs.

The eruptions due to *iodine* and *bromine* differ so much from the other drug eruptions that they are best considered separately. There is an erythematous eruption due to bromine which may occur in any part of the body, but is usually confined to the lower extremities; it is diffuse, and at times painful. A maculo-papular eruption has been described as occurring on the face and neck, the skin having a congested violaceous hue, with a copious eruption of maculo-papules and pustules, with enlargement of the sebaceous ducts and the formation of sebaceous crusts. The skin is flushed, but does not itch. As there is some fever and constitutional disturbance, this eruption may be mistaken for the erythematous syphiloderm, but the sebaceous character of the lesions is characteristic.

Wigglesworth has described a bullous eruption due to bromine, and characterized by lesions which were somewhat acuminate and varied in size from that of a split pea to the end of the finger. In some instances the bullæ ruptured, leaving sometimes a sim-

ple fringe of torn epidermis, and sometimes an ulcerated surface. Some of the bullæ appeared to contain blood.

The pustular eruptions due to bromine are better known than any of the other varieties. In their simplest form, resembling acne, they occur sooner or later in almost all persons subjected to a course of the bromides. Occasionally a "confluent acne" is observed. Here the smaller lesions are pea-sized, prominent, convex, vesico-pustules, seated on a hard, slightly elevated base, and surrounded by a vividly red areola. The larger lesions are flattened elevations, covered by a moist, flaccid cuticle, or thick, light-brown crust, and surrounded by a dark-red areola. The crust or cuticle being removed, the surface beneath presents numerous pin-head sized, yellowish-red protuberances. The secretion is found to be chiefly sebaceous in character. These confluent lesions may be from one-fourth of an inch to several inches in diameter. The peculiarity which chiefly distinguishes this form of bromide eruption from acne is that it may occur in any locality, often being found where acne never occurs, and neglecting entirely the favorite localities of that disease.

A bromine eruption is occasionally met with which resembles the eruption of erythema nodosum.

In the diagnosis of bromine eruptions the dusky rose or violaceous color of the lesions must be taken into account, and also the distribution of the lesions, the foetor of the breath, and the presence of bromine in the urine must be considered. Of course, the history is of importance.

With regard to the amount of the drug necessary to produce these skin eruptions, it can only be said that it varies greatly. While usually it is requisite that bromine or its compounds should be taken in considerable doses, and for some length of time, yet cases are on record in which very small doses have quickly brought out a characteristic eruption.

Like the eruptions due to bromine, those due to iodine have, some of them, at least, been familiar for a long time. The eruptions from iodine may be erythematous, papular, vesicular, bullar, pustular, or hemorrhagic. The erythematous form shows

itself in large disseminated patches in various parts of the body, sometimes forming a sort of iodic roseola. The forearms are usually attacked. If the use of the iodide is persisted in, the eruption may pass on to the papular form. The papular eruption is characterized by heat of the skin, with reddish patches, on which are situated numerous large papules elevated very slightly above the surrounding skin, sometimes disseminated over the surface generally. This form of eruption is not unlike urticaria, but has a brighter and less circumscribed coloration. It is rare. Vesicular eruptions resembling eczema are said to have been caused by the ingestion of iodine or its compounds, and several observers have reported a peculiar bullous eruption situated usually upon the head, neck, or upon the upper extremities; less frequently upon the lower extremities and trunk. The lesions begin as pin-point-sized vesicles, or as shot-like papules, at the apices of which vesiculation subsequently occurs. The lesions are pale yellowish-white and glistening. If the iodine be persisted in, and especially if given in large doses, the bullæ change to red and purple, and become filled with sero-pus and even ichor. In a few instances blood has been found in the bullæ at an early stage.

The pustular eruption due to the ingestion of iodine or its compounds is in almost every respect analogous to that produced by the bromides, only that the confluent form is extremely rare. It is peculiar in its subjective symptoms, itching at first, and later giving rise to severe throbbing pain. This symptom, together with the violaceous color of the lesions, and their cheesy, non-purulent contents, serves to distinguish the iodine eruption from syphilis or any other disease with which it is liable to be confounded.

A purpuric eruption due to the ingestion of iodine or its compounds is now and then met with. It may be brought on even by minute doses of the drug, the case of an infant having been reported where a fatal result was caused by a single dose of two and a half grains. Usually, however, the eruption is not severe, and is found upon the legs. Now and then other hemorrhages

may be caused simultaneously. It is usually produced at an early date from the first exhibition of the drug, but its appearance is occasionally delayed until the drug has been administered for some time. The purpuric eruption ceases when the iodine is stopped, but may be reproduced by even minute doses.

Both the iodine and bromine eruptions may often be prevented by the simultaneous administration of arsenic. As much as ten minims of Fowler's solution may be given in each dose when this is borne by the patient. Paget recommends the administration of aromatic spirits of ammonia with the same view.

The other drug eruptions, aside from those due to bromine and iodine, may be classed together, on the ground that they are almost always of an exanthematous character, resembling scarlatina, measles, roseola, urticaria, etc., and that idiosyncrasy bears a much more important part in their production than in the case of the drug eruptions described above.

Arsenic may produce erythema-form, erysipelatoid, papular, urticaria-form, vesicular (?), pustular, and furuncular (?) lesions. Herpes zoster is likewise said to be caused by the ingestion of arsenic, but sufficient proof of this has not yet been brought forward. The same may be said of the supposed production of alopecia areata. At times a bistre tint, similar in character to the blue color caused by the long-continued use of nitrate of silver (see *Argyria*), is said to be caused by arsenic.

Very small doses are sometimes sufficient to bring out arsenical eruptions in persons having the peculiar idiosyncrasy. A case is reported in which a rubeola-like exanthem was produced by three drops of Fowler's solution taken daily for three days.

The eruption produced by the ingestion of *belladonna* or *atropia* is always of an erythematous or scarlatiniform character. It is said to be more common among children, and often appears after the smallest doses, coming out very soon after the drug has been taken, and disappearing a few hours later. It usually invades the face and neck, but may cover the entire surface. It is bright red in color and sharply defined, not presenting exactly the appearance either of erythema or of scarlatina. It is

composed of large patches, disappearing under pressure, but reappearing immediately when this is withdrawn. This eruption may or may not be accompanied by burning or itching, and it is not followed by desquamation. The mucous membranes are apt to be involved at the same time.

The belladonna eruption is likely to be confounded with the rash of scarlatina. The previous history, however, the absence of lassitude, of chills, and usually of headache, as well as of febrile reaction and strawberry tongue, the ephemeral character of the eruption, and the accompanying dilatation of the pupil, will suffice to settle the question.

The mechanism of the belladonna eruption seems more easily explained than that of some other medicinal eruptions. It is, to all appearance, a secondary vasomotor paralysis of a marked character.

The *chloral* eruption is usually of an erythematous type, scarlatiniform, or of a dusky rose color, almost purpuric at times. The lesions are apt to occur in patches, on the face, neck, front of the chest, about the larger joints, and on both surfaces of the hands and feet. It is apt to be accompanied by swelling, heat, and severe itching of the affected parts. It may last from half an hour to several hours, and may end twenty-four later in light desquamation; relapses, even after discontinuance of the medicine, have been reported. Stimulants tend to bring out the eruption. The erythematous eruption, like that of belladonna, appears to be due to vasomotor paralysis, as also are the palpitations and dyspnoea, which are not unusual concomitant symptoms.

Urticaria-form and papular eruptions may also be produced by chloral, and vesicular lesions with œdema have been observed. In rare cases desquamation, with shedding of the nails and hair, has followed these symptoms.

Purpuric eruptions have been observed in a number of cases as the result of the ingestion of chloral, and some of these cases have been followed by general desquamation, while one has ended fatally.

The eruption produced by *copaiba* internally administered, is usually a perfectly characteristic papular erythema or roseola, the appearance of which is familiar to most persons who have occasion to prescribe this drug. It appears by preference upon the hands, arms, knees, feet and abdomen. Sometimes it appears suddenly and covers the entire surface. The patches are usually rose-colored, irregularly rounded, not appreciably elevated, sometimes isolated, sometimes grouped in large patches. If the use of the drug be discontinued the eruption lasts but a few days, but if the administration of the *copaiba* be persevered in, the eruption may extend and take on other forms. Itching is generally present, sometimes to an intolerable degree. The eruption disappears without exfoliation. Miliary, vesicular, and urticaria-form eruptions have been described. These forms of *copaiba* eruption may sometimes be mistaken for syphilitic erythema, but the onset of the latter is not so sudden; there is no itching, and the places of election—namely, in the case of the *copaiba* eruption, the upper and lower extremities, especially the backs of the hands, the knees, and around the malleoli and upon the breast, rarely over the whole body—are different. The aspect, color, and configuration of the patches are also different. Finally, the disagreeable odor of the skin in the *copaiba* eruption, owing to the large quantity eliminated by the various glands, is a diagnostic point of value. A case of "pemphigoid" eruption, probably of bullous urticaria-form lesions, with anasarca, but without albuminuria, has been reported. (The urine passed during the use of *copaiba* furnishes a deposit with nitric acid which may be confounded with albumen.)

The eruption produced by *mercury* is almost invariably of an erythema-form or scarlatiniform character, although cases have been reported in which vesicles, bullæ, pustules and phlegmonous lesions have been observed. The dose of mercury required to bring out the eruption in persons having an idiosyncrasy toward this drug is often quite small. Two grains (.14 ctgr.) of calomel in one case, and in another a single five-grain blue pill, sufficed to bring out a copious eruption. Engelmann reports the case

of a man who took in the course of an afternoon three doses of calomel, each a little over two grains (.15 ctgr.). Two hours after the last dose had been taken the patient began to experience a feeling of general discomfort; the skin became dry and began to itch more and more, the eyes became sensitive to bright light, the mouth and nose dry, and the voice hoarse. The face became puffed up and red, and this red color soon spread over the entire body, accompanied by severe fever, thirst and sleeplessness. When seen the next morning, the patient presented the appearance of a person suffering from severe erysipelas. The face was greatly swollen, particularly the eyelids, so that the latter could scarcely be opened; the skin was drawn, shining, and scarlet red, even in the scalp. The conjunctivæ were markedly injected, and the nasal mucous membrane was dry, as was also the mucous membrane of the lips and buccal cavity. The tongue was thickly coated, except the tip, which was of a deep purplish red. The red color of the skin appeared to extend over the entire body. The skin was very slightly infiltrated, excepting in the face; it was dry and very hot; temperature 104° F., pulse 120. There was no albumen in the urine. There were general symptoms of fever; the skin felt very hot and itchy, particularly on the palms and soles, ears and scalp. There was extreme general malaise. The eruption began to disappear in a day or two, and desquamation took place in large sheets. The general symptoms of malaise continued for a fortnight. It was very difficult to distinguish the eruption in this case from that of ordinary scarlatina. The history was, of course, of the greatest importance. It appeared that the patient had twice previously suffered in a similar manner after taking mercury. The first time he had taken it in pill. The second time he had been exposed in a room to the fumes of the toy known as "Pharaoh's serpents."

The eruption brought out by the ingestion of *opium* or *morphia* is usually of an erythema-form character, and often resembles closely that of scarlet fever, or, in some cases, that of measles or of urticaria. It is apt to attack the flexor surfaces, and is accompanied by severe itching. Occasionally complete desquamation

of the epidermis takes place over the palms and soles, the epidermis being removable in the form of complete casts of the hands and feet. It is said that the pharynx may be attacked by an erythematous inflammation.

In a case reported by Behrend, one-fourth grain (15 milligr.) of opium was given every hour until ten doses had been taken, or two and a half grains of the drug in all. Within a few hours the patient was seized with severe itching in the skin over the chest, and on the inner sides of the arms, wrists, hands, thighs, knees and calves. The itching was so severe as to prevent sleep. It was accompanied by a diffuse scarlatiniform eruption, which was made up of minute pin-point efflorescences, not sharply defined but separate, though at first sight they seemed to be diffuse except over the feet. The tongue was coated, the pharynx normal. The eruption faded rapidly when the opium was suspended, but returned again on recommencing the medicine. Desquamation took place at the end of fourteen days, in large patches, particularly over the backs and palms of the hands, and on the soles of the feet.

The *quinine* eruptions are among the most frequent of all drug eruptions depending on idiosyncrasy, and, next to those produced by bromine and ipdine, have been most carefully studied. Morrow has written an excellent monograph on the subject, and also more recently a very complete work on drug eruptions generally, to which reference may be made with profit.

The prevailing type of quinine eruption is erythematous, closely resembling the rash of scarlatina or measles. It first shows itself over the face and neck, but soon becomes diffused over the whole surface of the body. In exceptional cases it may not become generalized. Sometimes on desquamation the epidermis of the hands and feet is shed as a whole. Occasionally the quinine eruption may be papular in form, sometimes resembling erythema multiforme papulatum, or more frequently urticaria. In this class of cases there is more or less œdema, with distressing burning, tingling, and itching.

The quinine eruption of scarlatinous form may be distinguished

from scarlatina by the absence of the scarlatina tongue and sore throat. The pulse is too slow for the initial stage of scarlet fever, and the redness appears suddenly and without premonitory symptoms. The presence of quinine may also be demonstrated in the urine by observing fluorescence (after the chloride of sodium has been precipitated by nitrate of silver).

A special tendency to dermatitis of the scrotum has been noted in some cases of quinine eruption, and finally, a number of cases of purpura-like eruption from quinine have been reported.

As regards the other drugs mentioned little need be said, excepting that there is a general resemblance between them as regards their usual effects upon the skin. In eruptions due to the ingestion of drugs, we have in almost every case the imitation of some other eruption, but in an exaggerated form; the eruption is excessive in some way or another, and usually comes on without any premonitory symptoms, such as usher in the eruptions of the exanthemata, for instance. These points should be kept in mind in making a diagnosis in doubtful cases, and the question should at once be put as to what medicine, if any, has been taken.

Idiosyncrasy is the only word which can be used to explain the cause of eruptions due to the ingestion of drugs, and it may be added that they act through the nervous system. Beyond this our certain knowledge does not extend.

Dermatitis Papillaris Capillitii. Under this title has been described an eruption of the skin characterized by the appearance of pin-head-sized, isolated, or confluent elevations of the surface, with interspersed pustules, which finally form cicatriciform patches over which the hairs are either clustered in tufts or totally absent. The hairs are atrophied, yet firmly fixed in their follicles, and suffer elongation or fracture before withdrawal. The disease is encountered chiefly upon the nucha, occiput, and vertex. Papillomatous vegetations, crust-covered, hemorrhagic, and with a foul-smelling secretion, sometimes form, and eventually retract into a sclerotic tissue (Hyde). Some observers consider this affection a form of sycosis non-parasitica.

Dermatolysis. (*Dermatol'isis.*) Dermatolysis is a rare anomaly of the skin, consisting in a more or less circumscribed hypertrophy of the cutaneous and subcutaneous structures,

FIG. 2.



DERMATOLYSIS. After Marcacci.

characterized by softness and looseness of the skin, and a tendency to hang in folds. It is a rare and very striking affection, and may occur over various parts of the body, sometimes

developing to an enormous size. Herr Haag, the "Elastic Skin Man," who has been exhibiting himself in various parts of the country for the past few years, presents a striking instance of

FIG. 3.

DERMATOLYSIS. *After Marcacci.*

an anomaly closely allied to dermatolysis. Here, however, a remarkable looseness and elasticity of the connective tissue is the chief characteristic. The affection is closely allied to elephantiasis. The treatment of the circumscribed form of the disease

is removal by the knife, or galvano-cautery when this is practicable.

Dermatosyphilis. (See *Syphiloderma* or *syphilis of the skin*.)

Desquamation is the exfoliation or separation of the epidermis in the form of scales of a greater or less size. In the normal condition the epidermis is continually being rubbed off, washed away, or shed spontaneously. The dried and horny cells thus removed are constantly being renewed from beneath, the source of the epidermic growth being the rete Malpighii. As each cell grows and develops, the chemical and physical qualities of its constituents become changed and the cell loses vitality, its nucleus disappears, it becomes dry and lifeless, and is gradually cast off as effete. Under ordinary circumstances this normal desquamation takes place imperceptibly, in the form of fine powdery scales.

In certain pathological conditions of the skin, and in certain grave constitutional disorders, *e. g.*, scarlet fever, recurrent exfoliative dermatitis, etc., general desquamation may take place to a marked degree in large lamellæ, the epidermis being thrown off the hands and feet in glove-like casts, occasionally even including the nails. Also in certain abnormal congenital states of the skin, as ichthyosis, which should be described rather as a deformity than a disease occurring in connection with general constitutional disturbance, excessive desquamation may take place, in the form of bran-like scales.

Certain diseases of the skin, as psoriasis, are characterized by the profuse production of epidermic scales over circumscribed areas, and this symptom constitutes the clinical feature of the disease. In other skin affections, as, for instance, some forms of eczema, desquamation is the final stage in a series of pathological phenomena involving the cutaneous envelope.

In the scaly diseases, properly so called, epidermic exfoliation goes on for an indefinite period, during the whole duration of the disease in fact; while in affections where desquamation is a secondary phenomenon, but one exfoliation takes place, healthy

skin forming underneath as the desquamative lamella is in process of separation, as after the blisters of a burn.

Diabetes—Skin Diseases in Connection with. A variety of skin affections may be met with in connection with diabetes, and more or less dependent upon the condition of the system characteristic of this disease, or upon direct irritation from the saccharine urine. These are as follows: 1. *Anidrosis* or *asteatosis*, a peculiar dry, parched condition of the integument dependent upon the partial failure of the sweat or oil glands to secrete; 2. *Pruritus cutaneus*; 3. *Chronic papular urticaria*; 4. *Acne cachecticorum*; 5. *Roseola* and *Erythema*; 6. *Eczema*; 7. *Paronychia*; 8. *Furunculus* and *Anthrax*; 9. *Gangrene*.

Most of these are rare. Diabetic eczema is the most frequent and best known. It has two noteworthy characteristics; persistence and tendency to relapse. The reason of this lies simply in the difficulty of removing the cause. When diabetic eczema occurs in the acute form in women, it is usually confined to the vulva and immediate neighborhood. When, for any reason, the disease persists and takes on the chronic form, the mons veneris, lower portion of the abdomen, hips and groins may be involved. The symptoms are those of ordinary eczema vulvæ, only that the tissues are apt to be more thickly infiltrated.

The treatment of this form of diabetic eczema must consist, in the first place, in removal of the glycosuria. Diet and the usual remedies may be employed to this end. The customary local treatment (see *Eczema*) may also be employed. The following case will illustrate the plan of treatment I have found beneficial.

A woman, fifty years of age, who had had glycosuria of a moderate type for five years, suffered from eczema, of the moist, red type, affecting the buttocks about the anus and the groins, with dry erythematous eczema about the genitals. The eruption itched and burned excessively, the patient was highly nervous and lost much sleep.

The urine voided ranged from 40 to 50 oz., of 1035° to 1040°

specific gravity. Examination showed it to contain about 1200 to 1600 grains of sugar *per diem*.

The patient was placed upon strict diet. The bowels were regulated by compound licorice powder, and she was ordered a pill containing half a grain of codeine, afterwards increased gradually to a grain and a half, to be taken thrice daily. Bromide of potassium was used as a sedative at night. Locally, the treatment consisted of the following :—

R. Pulv. bismuthi oxidi, ℥j
 Acidi oleici, ℥j
 Cerae albæ, ℥iij
 Vaselini, ℥j-℥j
 Olei rosæ, ℥iij. M.

Cloths spread with this ointment were placed upon all affected parts of the skin proper, and were changed twice daily. About the mucous membrane of the genitalia the following wash and injection was employed :—

R. Sodii sulphitis, ℥iv
 Acid carbolic, f℥ss
 Glycerinæ, f℥j
 Aquæ, ad f℥iv. M.

The mucous membranes covering the clitoris and nymphæ, which were the seat of agonizing pruritus, were painted several times daily with a ten per cent. solution of muriate of cocaine. The parts were kept scrupulously clean and free from discharges, and, alternately with the injection, occasional vaginal douches with hot water were employed.

Under the employment of the codeine the quantity of sugar excreted, which had reached 1650 grains *per diem*, diminished gradually to 572 grains per diem, while the eczema, which had grown steadily worse under local treatment only, improved at the same time, and finally disappeared. While subsequent neglect and errors of diet caused an increase in the amount of sugar from time to time, the eczema and pruritus did not return, save to a very slight degree, and yielded promptly to treatment.

In addition to the local applications mentioned above, sul-

phurous acid about the genitalia (cautiously applied at first) and powders containing oxide of zinc starch and salicylic acid applied over the skin elsewhere, are likely to be of use.

The following formula is one I have used. Sometimes it seems too astringent, when it may be diluted with plain starch.

R. Pulv. acid salicylic, gr. x-xx.
 Pulv. lycopodii,
 Pulv. zinci oxidi, aa ʒj. M.

Of course, this cannot be used in the moist parts, as it would almost certainly cake and become very annoying. I should mention as a valuable adjuvant in many cases of diabetic eczema in the female the use of hot baths, simple or medicated with carbonate of sodium and starch. (See *Baths*.)

In men *erythema* and *eczema* are the commonest skin affections seen in connection with diabetes. *Erythematous balanitis* is usually confined to the immediate neighborhood of the meatus, which is seen framed in an oval erythema, glassy, smooth and turgid. *Herpetic balanitis* is characterized by the appearance of numbers of pin-head-sized excoriations on a red hyperæmic base, coalescing to form round or irregularly oval outlines, but without any perceptible initial vesicle, as herpes.

More common than either erythematous or herpetic balanitis, is *eczematous balanitis*, which is characterized by various appearances at different times, but is usually dry and desquamating, and its gray or white tint contrasts with the red ground of the glans. Here and there the surface is fissured and bleeding or crusted. Often besides the eczema a whitish scurf is to be met, which, under the microscope, is seen to be a vegetable parasite, resembling a saccharomycete (Fournier). The prepuce, like the glans, may be involved subsequently. When severe, the lesions of eczema rimosum are to be observed characterized by a circle of linear chaps, arranged around the preputial ring like the spokes of a wheel.

Diabetic paraphimosis may be the result of the progressive thickening and infiltration of the prepuce, and sometimes præ-

putial lymphangitis of chronic type causes the formation of nodules, which resemble vegetations, chancre, etc. Of course these extreme forms are very rare. I have never seen any cases.

The treatment of this form of eczema is in part preventive. There is no doubt but that the contact of the urine is one of the causes of irritation. Therefore, alkaline lotions, with dusting powders of oxide of zinc, bismuth, talc, boric acid, etc., may be employed. When there is phimosis, local baths of starch, together with frequently-repeated præputial injections, first with pure water, and then with medicated solutions of carbonate of sodium or borax. If there is suppuration, nitrate of silver solutions, 5 to 10 grains to the ounce, may be employed. The opposed surface of glans and prepuce should be kept separate by pledgets of absorbent cotton. Circumcision, Fournier says, should never be practiced unless the urinary sugar has completely disappeared.

The other forms of skin eruption met with in diabetes have, so far as known, no peculiar characteristics to distinguish them from the same lesions due to other causes. Gangrene is one of the less frequent affections observed. It usually appears at first in the form of bullæ, in disseminated points on the surface, and may take on a serpiginous course. There seems to be little doubt that the presence of sugar, which has been found in all the tissues and secretions in diabetes, or of one of its products of decomposition, is the exciting cause of most of the skin affections mentioned.

Dischromatosis. (See *Vitiligo*.)

Dissection Wound or Tubercle. (*Verruca necrogenica*.)

The results of inoculation from dead bodies may be local, confined to the point of inoculation, or they may be general, producing severe constitutional disturbance. Usually the disease begins by the formation of a small vesicle or pustule on a hard, inflammatory base, or of a patch of reddish or violaceous induration, occurring at some point of inoculation, as an abrasion, etc. There is also burning, itching, with pain usually extending up the arm to the axilla, and lymphangitis, with constitu-

tional symptoms. The wound, as soon as detected, should be thoroughly washed and sucked, or soaked in a solution of chloride of zinc, or burned with this caustic.

In other cases the disease is strictly local, being circumscribed, indurated and painful. The epidermis becomes thick and fissured, the sore secreting a thick or thin fluid, resulting in a crust. In other cases the disease begins in a papule or tubercle, which may assume a warty character. To this the name of *verruca necrogenica*, or "dissection tubercle," has been given. Its usual seat is about the fingers and joints. The course of the disease is chronic, and it is generally rebellious to treatment. Stimulating ointments, as the oleate of mercury ointment, 10 to 20 per cent. strength, nitrate of silver, caustic potash and acetic acid, are among the remedies usually recommended. A surgeon of much experience has recently advised that the warty lesions and skin around them should be steeped thoroughly in solution of the acid nitrate of mercury. This is to be repeated from time to time, as the effects pass away. It must be done repeatedly, at short intervals. Patience and perseverance for some months are required.*

Driving in Eruptions. When, as formerly, skin diseases were supposed to be due to some "acrid humor in the blood," which, in its struggle to escape by the emunctories of the skin, dealt destruction to the tissues generally in rending its way out, physicians avoided most sedulously any attempt to "check the rash," for fear that, being prevented from escaping by this natural channel, the disease might "fall upon" some vital part. Some such view was extensively prevalent until quite recent years, and even now I fear that this superstition affords an easy way of escape, on the part of not too scrupulous physicians, from the treatment of obstinate and troublesome skin diseases, especially in children. Cases are occasionally cited, in which the "suppression of an eruption has been followed by disease of the brain or lungs, or by a still worse eruption somewhere else, and it has

* *Veruca necrogenica* has of late been thought to be a form of tuberculosis, the characteristic bacillus having been detected in the lesions.

been imagined that the latter was effect and the former cause. But no particle of proof, or even of reasoning, has been brought forward to prove this notion, which, in fact, is as absurd as to imagine the general drying up of wells and springs observed in the neighborhood of Vesuvius just before a volcanic outbreak must be the cause of that "eruption." For my part, there are many stubborn skin diseases which I should be only too glad to "dry up," either in my patients or my own person, were I thus afflicted, and I would cheerfully run any risk to be imagined by the advocates of acrid humors, rather than permit a painful and disgusting skin affection, as eczema, for instance, to go uncured.

Drug Eruptions. (See *Dermatitis medicamentosa*.)

Dysidrosis (*dis-idro'-sis*) is an affection of the skin characterized essentially by the retention in the cutaneous follicles of sweat rapidly and freely secreted. The follicles are much distended, and congestion may follow with the formation of bullæ, maceration of the epidermis, and sometimes more or less dermatitis (Tilbury Fox.)

In its slightest form the eruption is confined to the hands, occurring in the interdigits, over the palm, and along the sides of the fingers and on the palmar surface—some or all of these parts. The eruption may occur in summer or in winter, affecting usually persons who perspire freely. Patients complain of feeling weak and depressed. The eruption is made up at first of minute vesicles imbedded in the skin, which do not readily burst, and when fully developed resemble boiled sago grains. They are best seen on the palmar surface of the tips of the fingers, but in severe cases they may occur more or less over the whole palm of the hand as well as on the fingers. Itching and burning are always present. As the disease progresses the vesicles become more distended and raised, eventually yellow in color, running together and forming an aggregated mass of small bullæ which may develop into a considerable size. The hand is then very stiff and painful. If the vesicles are pricked, a clear fluid, at first alkaline and later acid, runs out. If left undisturbed the vesicles and bullæ dry up and the cuticle peels off, leaving a non-

discharging, reddened, exposed derma. But the cuticle, especially about the roots of the fingers on the palmar aspect, may become sodden and like wet chamois leather. In slighter cases the disease may not run on to the development of bullæ.

Dysidrosis is most apt to be mistaken for eczema, but it is not inflammatory, as eczema is, and is unaccompanied by sero-purulent discharge, crusts, etc. The vesicles are not produced by the uplifting of the cuticle by sero-purulent fluid, but by the distention of the follicles by retained sweat. In rare cases, however, eczema may follow the disease.

Treatment in the severer forms of the disease should be both general and local. Dyspepsia and anæmia are not infrequent accompaniments of the disease. The kidneys should be made to act freely by means of diuretics. Aperients should also be used, and, in gouty or acid conditions, alkalies. Later, quinine, arsenic, and iron are useful. Locally, dilute lead-water and soothing ointments should be kept applied, and if the sweat-glands generally are involved, bran and starch baths may be used.

The disease, or a similar one, has also been described under the name "Pompholyx."

Ecthyma. (*Ek-thi-ma*.) Ecthyma is an affection of the skin characterized by the formation of one or more discrete flat pustules, the size of a finger nail, situated upon a firm, inflammatory base, followed by an excoriated surface and a brownish crust. The existence of the disease as an affection *sui generis* has been denied by German authorities following Hebra, who considered the ecthymatous pustules as part of an eczema, a symptom and not a disease. It is therefore described meagrely or not at all in German works on skin diseases. In America, however, where the "American Statistics" show its occurrence 726 times in a total of 123,746 cases, a proportion of .587 per cent., and in other countries, observation has shown that ecthyma possesses certain peculiarities which distinguish it from other skin affections, and it is considered a separate disease.

The pustules of ecthyma are generally well developed, and may be single or numerous. They are notably flat, broad, and

seldom fully distended. At first yellowish, they are later of a reddish color; in size they vary from a small to a large finger nail. There is usually a hard, red, tender areola, the tint of which, especially when the lesions occur upon the legs, is peculiarly livid or "lurid." The lesions dry into flat crusts of a dark brownish color, which when raised show an excoriation covered with a sanious secretion.

An acute and a chronic form of ecthyma are described by authors. The acute form, which is very rare, commences, according to Tilbury Fox, with slight feverishness, and occasionally sore throat; locally there is first a sense of heat and burning, followed by the appearance of reddish raised points, with hard indurated bases, and distinct vivid areolæ; these points, which vary in size from that of a pea to that of a quarter dollar, quickly pustulate and are often accompanied by acute, sharp pain. In two or three days the pustules give exit to discharge, which dries into the crusts above described, and these fall off in a week or so, leaving behind dark stains. The lesions may be few or many in number. In the latter case a good deal of irritation is set up; the patient may be unable to sleep for pain, and the glands and lymphatic vessels may become inflamed, small abscesses forming subsequently. The disease is generally protracted by successive crops of pustules, or it may relapse into a chronic state. The limbs, shoulders, and trunk are the chief seats of the disease.

Although I cannot recall a case of the typical acute form just described as having come under my notice, yet it is not uncommon for some of the above symptoms to be observed in connection with the more chronic variety usually met with. The latter most commonly occurs in the form of a single lesion, or several lesions, upon the legs or thighs, less frequently upon the buttocks, arms, face, or shoulders. The lesions show the local appearances described, but are not usually accompanied by any general disturbance. The patient commonly presents himself with one or more flat, dark, crusted lesions, with a lurid red areola and some scratch marks. When the legs are affected

slight œdema is often observed, and the lesions sometimes eventuate in chronic ulcers. The general condition of the patient is one of low nutrition, and the affection is rarely met with in people of the better class. Ecthyma is in fact the outcome of want, misery, and chronic alcoholism; it occurs in persons who live in the slums, in prisons, and in almshouses, and who have been subjected to privation. Improper and insufficient diet, abstinence from food, as in prolonged alcoholic debauch; want of ventilation, excessive work, and uncleanness are among the causes of the disease. The lesions sometimes leave a scar.

Ecthyma may be confounded with eczema pustulosum, impetigo, dermatitis herpetiformis, furuncle, and the large, flat papular syphiloderm. From eczema it is distinguished by the size, form, and discrete arrangement of its pustules, by the indurated base and the areola, the large, flat pustule, the excoriation, and the blackish or brownish crust. The character of the developed pustule distinguishes it from impetigo or impetigo contagiosa. From the latter its non-contagious character and different distribution distinguish it. The history will prevent us from confounding it with dermatitis herpetiformis, the latter displaying various quite diverse lesions at different periods of its course (see *Dermatitis Herpetiformis*). From furuncle the deep hard infiltration of the latter, with the preponderance of solid tissue as compared with pus, and its tendency to a conical shape, together with the quite different appearance of the furuncular lesion as it approaches its climax, and the absence of a marked crust, will distinguish ecthyma. From the large, flat pustular syphiloderm, which ecthyma resembles closely in some respects, it is chiefly distinguished by its base, which is merely excoriated, whereas the removal of the crust in the syphilitic lesion shows an ulcer beneath, with pus.

DIFFERENTIAL DIAGNOSIS BETWEEN

ECZEMA. PUSULOSOMA.	IMPETIGO.	IMPETIGO CONTAGIOSA.	DERMATITIS HERPETOFORMIS.	LARGE, FLAT, PAPULAR SYMPHYLODERMA.
Legs, shoulders and back are the commonest seats of the eruption.	May occur in any part of the body.	Usually face and hands, but arms and scalp may be affected, or elsewhere; mucous membrane of mouth and conjunctiva sometimes affected.	May occur on any part of the body.	May occur anywhere, but usually on the back, shoulders and extremities.
Pustules well developed; single or several grouped together; more distinct pustules; discrete; or numerous and running together.	Two to three to a dozen or more distinct pustules; discrete; yellowish or whitish.	Small, isolated, flat or raised vesicles, which become vesico-pustular; three or four to a dozen may run together and form a patch.	Yellowish pustules arranged in groups or an annular form; tend to run together. As they dry new groups of lesions form on periphery.	Usually numerous.
Lesions flat, broad, sizes and shapes; commonly distended.	Lesions of various sizes and shapes; commonly distended.	Small, isolated flat vesicles, becoming vesico-pustular in a day or two; flat; elevated; yellowish.	Various sized lesions. In same individual vesicles and blebs.	Flat and rapidly crustified.
Size from small to large; finger-nail, imbricated base; hard, red, tender areola.	Usually pin-head to pea size; no marked areola; no induration of base, but great thickness of skin in seat of eruption.	At first, small, rapidly increasing to blebs, at times; slight areola at first, which disappears on maturation.		Large finger-nail sized, on a deep red base.
Dry into flat, brownish crusts, which, when lifted, show an excoriation.	When mature, contents become altered, sometimes bloody; dry into crust or are absorbed; if broken, thin, sero-purulent fluid exudes; crust drops off, leaving nodal base.	Dry in a few days to flat, straw-yellow crusts, slightly adherent; excoriations beneath, with thin puriform fluid.	Dry with yellowish, greenish or brownish crusts.	Seldom remain pustules, but rapidly dry into heaped up, oyster-shell like crusts, on an ulcerated base.
Heat, itching and a certain amount of pain.	Little or no itching.	Little or no subjective symptoms.	Violent itching and constitutional disturbance.	No itching.
Course indefinite; comes in successive crops.	Course indefinite and chronic.	Course usually definite at to days.	Relapses constant over years.	Course much influenced by treatment.
Outcome of want and misery; alcoholism.	Usually due to impaired nutrition; not necessarily connected with misery.	Contagious and auto-inoculable; want of cleanliness favors its occurrence.		History of syphilitic, contagion or other lesions.
Occurs commonly in adults.	Children and adults.	Almost exclusively children.	Both sexes, children and adults.	Adults.

The internal treatment of ecthyma should be tonic and supporting. Good hygiene and diet are requisite. Ecthyma is a cachectic disease, and it often occurs in those in whom the eliminating organs are sluggish, and in whom effete material has been largely produced in the system. In addition it is often secondary to other diseases, as scabies and pediculosis, or it results from the action of external irritants, as lime, sugar, etc. Of course in these cases the irritating cause must first be removed. This having been accomplished, soothing local remedies, as lead water or black wash, may be applied to the general surface, while rags spread with oxide of zinc ointment may be applied to the crusts and lesions with the view of softening them. When the excoriations are exposed by the removal of the crusts, a mild stimulating ointment as the following may be employed :—

R. Hydrarg. chlor. mitis, gr. xv
 Ung. zinci oxidi, ʒj.

Or this :—

R. Bismuthi subnitrat., ʒj
 Ung. zinci oxidi,
 Ung. petrolii, aa ʒiv.

The internal treatment should include rest, fresh air, bathing, cleanliness, with such nourishing food as milk, eggs, strong soups, etc. In a few cases the administration of alcohol and malt liquors is desirable, but in the majority of cases these should not be prescribed. In old persons tonics and remedies which will stimulate the action of the kidneys may be employed. The following formula, analogous to the well-known Basham's mixture, is useful :—

R. Liq. ammoniæ acetat., f ʒiiss
 Acid acetic, dil., ʒiv
 Tinct. ferri chlor., f ʒij
 Curaçoa, f ʒij
 Aquæ, Oss. M.

SIG.—A tablespoonful in water three times a day between meals.

In younger persons we may prescribe a brisk purge with blue pill and colocynth, followed by an aperient tonic, as the mist. ferri acid. of Startin (see p. 135, under *Eczema*).

In broken-down cases pure tonics, as quinine, iron, etc., may follow these or be used in connection with them.

The prognosis of ecthyma is favorable ; a few weeks generally suffice to effect a cure if the patient can follow out the treatment carefully.

Eczema (*eks'-ema*). Eczema is by far the most common of all diseases of the skin encountered in this country. The American statistics show that out of 123,746 cases of skin diseases, occurring in all parts of the United States and Canada, no fewer than 37,661, or nearly thirty and a half per cent., were cases of eczema. When we add to this the fact that most cases of eczema are either disfiguring to the personal appearance or are accompanied by more or less burning, itching or other uncomfortable and painful sensations, it must be admitted that this disease is the most important of all skin affections for the physician to know and to treat intelligently.

Eczema is an inflammatory acute, or chronic, non-contagious disease of the skin, characterized at its commencement by erythema, papules, vesicles or pustules, or a combination of these lesions, accompanied by more or less infiltration and itching, terminating either in discharge, with the formation of crusts, or in desquamation. It is eminently a protean disease. At one time it begins as an erythema ; later this may become moist and secreting, and finally terminate in a thickened, dry and desquamative surface. At another time the affection may begin in the form of vesicles or pustules, with swelling and heat. These soon burst, and a red, weeping surface results, which is soon coated with bulky crusts from the drying of the liquid, gummy discharge. The character of the patch may then suddenly change, and instead of a weeping surface there may exist a dry, scaly, infiltrated, fissured patch of skin, which continues until the disease is removed. Or, again, papules may first appear ; these may remain as such throughout their course, or may pass into other lesions, or they may be associated sooner or later with vesicles.

There is no other disease of the skin in which the lesions

undergo such sudden and manifold changes, and every variety may manifest itself in turn upon the same individual.

More or less itching is almost always present in eczema. It may vary in degree from the merest titillation to unendurable torture. Sometimes burning takes the place of itching; at other times they occur together.

Eczema may be acute, running its course in a few weeks and then permanently disappearing, or it may be chronic and continuous, or recurring through years. It may occur in small patches single or multiple, or more rarely covering extensive surfaces. Unless very extensive it is not ushered in by constitutional symptoms.

The varieties of eczema are named according to the lesions which the disease assumes at its beginning. These are as follows:—

Eczema erythematosum. This form shows itself in typical cases, first as an undefined erythematous state of the skin, occurring in small or large patches without discharge or moisture. Commonly the patch, which is sometimes slightly infiltrated, is covered with fine, thin scales of epidermis, and now and then the surface is slightly excoriated. The skin may be bright or dark red or even violaceous. It often has a yellowish tinge. It is occasionally mottled. The process may affect a small surface or a large one; it is often better one day and worse the next, or it may even go away entirely only to return a little later. It is apt to be chronic, and the relapses are annoying and discouraging, especially in winter time. Exposure to external heat or cold, a heavy meal or indulgence in alcoholic drink, is apt to be followed by an exacerbation of the disease. Burning and itching, alone or together, are prominent symptoms. Eczema erythematosum may run its course as such, or may develop into Eczema squamosum. Vesicles or pustules are rarely seen. Eczema erythematosum is most apt to occur upon the face and genitals.

Eczema vesiculosum. Vesicular eczema commonly begins by a feeling of heat and irritation in the part, which shows a dif-

fuséd or punctate redness, with itching and burning, and small vesicles soon show themselves, either alone or grouped, or sometimes running together. They are soon filled with a yellowish, gummy fluid, and then they ordinarily break and form a crust. Sometimes, however, the vesicles simply dry up without breaking. In more marked cases new crops of vesicles continue to come out, and when a considerable surface is covered, the quantity of fluid poured out is quite large, and the underclothing or dressings are saturated. When the secretion dries, it is very sticky and tenacious, and this is characteristic of this form of eczema. Typical eczema, as described, is not so common as the more complex varieties where the lesions are multiform; papules, papulo-vesicles, vesicles, pustules and other lesions being found in conjunction. The two chief characteristics of this form of eczema, wherever found, are the itching and the gummy secretion, leaving a yellow stain upon the linen. Patients are almost always struck by this feature.

Vesicular eczema may occur in very small patches, or in quite extensive areas. As it shows itself in children over the face and scalp, it forms the eruption popularly known as *milk crust*, *scalded head*, *tooth rash* or *moist teller*.

Eczema pustulosum (Eczema impetiginosum). Pustular eczema is very much the same in its original appearance as vesicular eczema, only that the lesions assume the form of pustules rather than of vesicles. There is usually less heat and itching. A strict line cannot be drawn between the two forms, for they are apt to run into each other, and may coexist on the same subject and in the same patch. The scalp and face are favorite seats of pustular eczema, and it is apt to occur in children who are badly nourished or who are being brought up by hand. It also occurs in ill-fed and scrofulous adults. The same causes which would bring on vesicular eczema in a tolerably healthy individual will arouse the pustular form in a poorly nourished person. For this reason pustular eczema always calls for tonic and supporting treatment.

Eczema papulosum. Papular eczema appears in the form of

small, round or acuminate papules, varying in size from a small to a large pin's head. In color the lesions are bright or dusky red, sometimes violaceous. They may be discrete, or may run together, forming large patches, and these are often infiltrated. Now and then they become abraded and moist, forming eczema rubrum. Papular eczema is apt to occur on the arms, trunk and thighs, especially the flexor surfaces. It may involve a very small surface, or it may cover a large area of the body, and it is apt to be the most stubborn, troublesome and annoying of all the forms of eczema. Itching is the most prominent and troublesome symptom; at times this is agonizing. Patients tear and gash themselves, in their efforts to gain relief, and I have seen chronic cases where the nails have been worn to the quick and the ends of the fingers polished by the almost ceaseless efforts of the patient to assuage the torment, if only for a moment.

Eczema rubrum. This must be regarded rather as a secondary condition resulting from previous morbid action, than a distinct variety. It is a variety only in a clinical sense. It may result from eczema erythematousum, vesiculosum, pustulosum or papulosum. In eczema rubrum the surface of the skin is inflamed and infiltrated, red, moist and weeping; occasionally it is more or less covered with yellowish or brownish crusts, often completely overspreading the part. Unless artificially detached, these crusts may sometimes continue to adhere, the process of exudation meanwhile going on underneath. Under these circumstances the appearance of a rough, dirty, yellowish or brownish scale is observed, instead of the shining, red, oozing surface. Eczema rubrum may occur upon any part of the body, although it is most commonly found upon the legs or the flexures of the joints, particularly the former. The swollen, infiltrated, violaceous, red leg of eczema rubrum, with its varicose veins, its glazed and shining, or raw surface oozing serum at a thousand pin-head orifices, with furious itching and burning, is a characteristic spectacle not to be forgotten when once seen.

Eczema squamosum. Scaly eczema is an important clinical variety of the disease. Like *E. rubrum*, it follows and results

from the erythematous, vesicular, pustular or papular forms of the disease. It is particularly apt to succeed erythematous eczema. When typical, it shows itself in the form of variously sized and shaped reddish patches, which are dry and more or less scaly. The skin is always more or less infiltrated or thickened. Squamous eczema may be only an ephemeral stage in the evolution of the disease. More commonly, however, the term is applied to denote a chronic condition, which may last for a long time.

Other lesions are encountered in eczema which are worthy of mention. These are *rhagades* or fissures, occurring when the diseased and infiltrated skin becomes cracked by flexure, as about the joints or at the margins of the lips or anus. Chapped hands, for example, are typical instances of fissured eczema. Sometimes eczema may assume a warty condition, and at other times hard, sclerosed patches may form.

In addition to the clinical varieties of eczema above described, the disease may fitly be divided into varieties, according as it assumes the *acute* or *chronic* form. The division, which is a distinct one, refers not so much to the actual duration of the disease, as to the pathological changes which occur during its course. When the general inflammatory symptoms are high and the secondary changes insignificant, the disease may be said to be acute. When, however, the process has settled into a definite course, the same lesions continually repeating themselves, accompanied by secondary changes, the disease is to be considered chronic.

Eczema is, as I have said, by far the commonest of all skin diseases. It attacks persons in all grades of society, and occurs at all ages and in both sexes. In some cases it appears to be, in a certain sense, hereditary. I have found it commonly in the children of persons of light complexion, with fair to reddish hair, with a tendency to scrofulous affections. Some persons are so prone to eczema that the slightest provocation will bring on the eruption, and an attack of dyspepsia, which in another person would have no effect on the skin, or contact with an irritant which in most persons would only cause a transient dermatitis, are, in such individuals, a sufficient cause to bring out an ecze-

matous eruption. Dyspepsia and constipation are among the commonest constitutional causes of eczema. In certain individuals the presence of an excess of uric acid and urates in the system is sufficient to produce and keep up eczema. The occurrence of gout and rheumatism in connection with eczema has often been alluded to by writers. I am inclined to think, however, that gout is among the rarer exciting causes. Improper food, as to quantity and quality, acts as an exciting cause. During a period of commercial depression which occurred some years ago, I found many working people the subjects of eczema, clearly brought on or much aggravated by coarse and insufficient food. It is, however, among infants and young children that this cause of eczema most frequently comes into play. Pregnancy and lactation, debility, nervous exhaustion, excessive mental or bodily work, dentition, vaccination, internal irritation, as of ascarides or tænia in the bowels, may also determine the eruption of eczema.

Eczema is not contagious. It cannot be acquired from being in contact with or handling the discharge.

Among the local causes of eczema, which are numerous and important, and which give rise to the condition known as "artificial eczema," are certain cutaneous irritants, as croton oil, mercurial ointment, tincture of arnica, tincture of cantharides, mustard, antimonial ointment, sulphur and turpentine. Here also may be mentioned the rhus venenata and toxicodendron, the poison oak and ivy. All these irritants, and especially the latter, usually at first provoke dermatitis (see *Dermatitis venenata*), yet in certain individuals and under certain circumstances, this may pass on to true eczema. Heat and cold, excessive perspiration, especially about the genitalia, and other places where the skin inclines to form folds, may give rise to the affection, which under the latter circumstance is known as *eczema intertrigo*.

Eczema is of much commoner occurrence in the winter than in the summer. The atmosphere of January and February, and particularly the cold bleak weather of March, seem to favor the

occurrence of the disease. Many cases of eczema get well in summer only to recur again in winter. On the other hand, however, cases are occasionally encountered where the attack only occurs in summer time, relapsing thus year after year.

Water, as in water dressings or in fomentations, or in the inordinate use of bathing, may be a cause of eczema. The insensate declamation against filth, or want of personal cleanliness, as an almost universal cause of skin diseases, which is too common, not only among superficial writers, but among physicians who ought to know better, would in many cases be better replaced by a caution against excessive ablution. The custom of very frequent bathing, especially when soap is used, is often harmful to the skin to a considerable degree. Alkalies, acids, strong and harsh soaps, may give rise to chapping and fissuring of the skin and to eczema. Finally, among the local causes of eczema, may be mentioned the irritation caused by the presence of lice and itch mites, together with the scratching to which they give rise.

The diagnosis of eczema is of great importance, especially as the disease shows itself in such protean forms. There are, however, certain features of eczema, one or more of which are present in every case of the affection, and these may serve to aid in the diagnosis. Inflammation of the skin exists in a greater or less degree in all cases of eczema. It is indicated by a certain thickening of the skin, which may usually be seen by the eye, and in most places detected by rolling a small pinched-up portion of the skin between the finger and thumb. Swelling and œdema exist in all acute eczemas, and often in chronic cases. The patch is red and congested. In most cases of eczema there has been more or less fluid exudation or moisture, at one stage or another, in the history of the disease. This is termed "weeping," "discharging" or "running." The fluid may be clear, limpid and yellowish, or turbid and puriform, or it may contain blood. This discharge is a most characteristic feature of eczema, and is not present in any other disease. The crusts formed by the drying up of the discharge are characteristic. When this has been

copious the crusts form rapidly, and in quantity so as sometimes to cover and mask the skin. They are yellowish, brownish or greenish in color, and when removed show a moist surface beneath, but no ulceration. Among the most important diagnostic symptoms of eczema is the subjective one of itching. It is often intense, being more marked than in other diseases. It is rarely altogether absent, though it may vary much in degree. Burning is also a not unfrequent subjective symptom, being more apt to be present in erythematous eczema, and often giving way to itching as the disease progresses. The itching of eczema often gives rise to an irresistible inclination to scratch, as was noted in speaking of the papular variety of the affection.

The diseases with which eczema is most likely to be confounded are the following :—

Erysipelas sometimes resembles eczema erythematosum, especially as it occurs upon the face. It is, however, acute ; it begins at a given point and creeps slowly from place to place. The inflammation is a deep one ; the surface is smooth, shining, tense and more or less dusky red, while deep infiltration, œdema, heat and swelling exist underneath. Erysipelas is also accompanied by considerable fever and constitutional disturbance. There is no discharge from erysipelas save that from bursting bullæ, which sometimes form during the latter stages of the disease.

Urticaria, particularly that variety accompanied by the formation of small, papular lesions, is occasionally mistaken for eczema papulosum. The irritable condition of the skin, the history of itching and burning occurring before the appearance of the lesions, all characterize urticaria in contradistinction from eczema. If, when the edge of the finger nail, a pin, or other sharp object be drawn along the skin, a raised white welt, rapidly changing to red, is observed, urticaria is usually present.

Herpes zoster sometimes resembles eczema vesiculosum, but is distinguished from it by the arrangement of the vesicles, the more regular grouping of the lesions of zoster along the line of some well-known nerve trunk, and the ordinary occurrence of neuralgia in connection with the zoster eruption.

Pityriasis, as it occurs upon the scalp, is often very difficult to distinguish from eczema squamosum occurring in the same locality. The difficulty of diagnosis is occasionally enhanced by the simultaneous occurrence of both affections upon the same individual. In eczema, however, the scales are larger, less abundant and dryer than in pityriasis. Eczema is more apt to occur in a patch on the scalp, while pityriasis is more generally diffused. The skin in eczema is usually red and inflamed, and is always itchy; in pityriasis it may be even paler than normal, and may have a dull, leaden hue. It is commonly less itchy, also.

Psoriasis is often confounded with eczema, the diseases, when occurring in limited patches or upon the scalp, being sometimes almost indistinguishable. Old, infiltrated, inflammatory patches are especially difficult to make out, but in psoriasis the edges usually terminate abruptly, while in eczema they are more apt to fade into the surrounding skin. The scales on eczema patches are thin and scanty; on the patches of psoriasis they are comparatively more abundant, larger, silvery and imbricated. In eczema there is usually some history of moisture or weeping, in one stage of the disease or another; in psoriasis the process is always dry. The distribution of the disease, and the occurrence of patches on other parts of the body, may aid in the diagnosis. In doubtful cases, where only a few scattered lesions are presented for examination, the whole surface should be diligently searched over, for a single lesion in some part of the body may, by its typical aspect, betray the nature of the disease where the majority of the lesions are quite doubtful in appearance.

Lichen ruber planus may be confounded with eczema, but the peculiar shape of the lesions in lichen ruber planus, to be described further on, together with their dusky hue, and the fact that they usually run a quiet, chronic course, without change, and leave a deep stain behind, all seem to distinguish this affection from eczema.

Pityriasis rubra is a very rare disease, and is seldom met with in this country. It presents symptoms which resemble closely

those of generalized erythematous and squamous eczema. It may be distinguished, however, by its universal redness; the abundance of large, thin, papery, whitish, epidermic scales, which continually reproduce themselves; slight itching; burning heat; and, lastly, by the absence of marked infiltration, and thickening of the skin, a symptom common in eczema. It undergoes but slight changes throughout its course.

Tinea circinata is sometimes mistaken for eczema, but the course of the two diseases is quite different, and the microscope will almost invariably settle the question of diagnosis by showing the presence or absence of the characteristic fungus of tinea. *Tinea tonsurans*, in its milder and more chronic stages, may readily be mistaken for eczema; the diagnostic points will appear in the description to be given of that affection later on.

Sycosis, both of the parasitic and non-parasitic varieties, sometimes resembles eczema of the beard. The former, however, is scantily crusted, and when the crusts are removed, instead of the smooth, soft surface of eczema, a rough, dusky-red, mamillated surface is revealed. The loose hairs are also loaded with the characteristic microscopic fungus about their roots. *Sycosis non-parasitica* is essentially an inflammation of the hair follicles, and while eczema is superficial, sycosis usually spares the surface and attacks the hair follicles only.

Favus, a disease of rather rare occurrence in this country, sometimes resembles eczema; but the peculiar canary-yellow color of the favus crusts and their mouse-like odor is almost unmistakable, and the microscope will quickly settle the question of diagnosis, for the peculiar fungus of favus is very abundant in the lesions of this disease.

Scabies is very likely to be confounded with eczema, and the diagnosis is often difficult. This can easily be understood when it is considered that the eruption of scabies is, in fact, largely an eczema. Eczema, however, does not show the marked preference for certain localities, as the hands and fingers, buttocks, axillæ, abdomen, mammæ, nipples and penis, which scabies displays. But, chiefly, the presence or absence of the peculiar

burrow of the itch insect will decide almost infallibly between the two affections.

Syphilis. Eczema of the scalp is at times liable to be mistaken for syphilis. There is a form of pustular eczema, characterized by the presence of a few scattered lesions of the scalp, without a sign of disease elsewhere, which it is sometimes difficult to differentiate from the pustular syphiloderm of the scalp. The occurrence or absence of a history of syphilis, or of concomitant syphilitic lesions in other parts of the body, and the success or failure of a treatment other than anti-syphilitic, will demonstrate whether one or the other affection is present. Occasionally fissures with abundant purulent secretion occur on the scalp in the course of syphilis, and this form of the eruption may closely resemble confluent pustular eczema. I met with such a case some years ago, where the diagnosis was extremely difficult, and where the ordinary anti-syphilitic remedies even failed for a time to give relief. The disgusting odor which ordinarily accompanies the discharge from this form of syphilitic disease, will usually, however, serve to distinguish it.

The following tables will present the differential diagnosis of eczema in a more graphic form :—

DIFFERENTIAL DIAGNOSIS

BETWEEN

ECZEMA (ERYTHEMATOSUM).

1. Not contagious; frequently history of eczema elsewhere.
2. Accompanied by mild symptoms.
3. Little or no œdema, but some infiltration, shown by the thickness of the skin on pinching up a roll between the fingers. Surface dull red and often slightly scaly.
4. Not a creeping disease, though it may spread irregularly.

ERYSIPELAS.

1. Frequently history of contagion.
2. Well-marked constitutional symptoms.
3. Shining redness, the skin tense, marked œdema.
4. A creeping eruption, spreading peripherally.

ECZEMA (ERYTHEMATOSUM).

5. Inflammation less acute and more superficial.
6. Itching perhaps more marked than burning.
7. Not apt to be painful on pressure.
8. Not unfrequently some secretion at one stage or another.
9. Vesicles form early if at all.
10. Runs a chronic course.
11. No line of demarcation.

ECZEMA (PAPULOSUM).

1. History of eczema.
2. Eruption appears more gradually.
3. Often extensive.
4. Lasts usually for weeks.
5. Absence of blood crusts, excepting in connection with the papular lesions.
6. Usually accompanied by other forms of eczema.
7. Itching severe. Not so much burning or pricking. Not so markedly aggravated by currents of air, etc.
8. Eruption remains the same for days.
9. Skin not especially irritable.

ERYSIPELAS.

5. Inflammation very acute and deep seated.
6. Intense burning and little pruritus.
7. Usually very painful on pressure.
8. No discharge except from ruptured blebs.
9. Vesicles or rather blebs form late.
10. Runs a rapid course.
11. A distinct line of demarcation.

URTICARIA.

1. Often history of error in diet, or dyspepsia.
2. Eruption appears suddenly.
3. Usually not extensive.
4. The separate attacks may last but a few hours.
5. Frequent presence of blood crusts from scratching as the only evidence of the disease.
6. Not accompanied by other forms of eruption elsewhere.
7. Itching, tingling, pricking and burning intense. Usually aggravated by currents of cold air, undressing, etc. Often intense nervousness.
8. Exacerbations may occur in a few hours.
9. Welts form immediately on irritation of the skin.

ECZEMA VESICULOSUM.

1. Begins with a slight burning or itching.
2. Vesicles seldom form distinct groups.
3. Vesicles tend to run together.
4. Vesicles small.
5. Vesicles tend to rupture.
6. Formation of crusts.
7. Eruption accompanied by more or less intense itching.
8. No special arrangement of lesions.
9. Eruption occurs on both sides.

HERPES ZOSTER.

1. Neuralgic pains a premonitory symptom.
2. Vesicles are arranged in distinct groups.
3. Vesicles markedly distinct and independent.
4. Vesicles large.
5. Vesicles do not rupture spontaneously.
6. No crusting unless vesicles are accidentally ruptured.
7. Burning pain, often lancinating, accompanies the eruption.
8. Eruption follows the course of some nerve.
9. Eruption limited to one-half of the body.

ECZEMA (SQUAMOSUM).

1. Presence of moisture at some time.
2. Skin red and thickened.
3. Scales more firmly adherent.
4. Ears frequently affected.
5. Alopecia less frequent, and the hair usually returns after the eczema is cured.
6. Hairs frequently matted together.

PITYRIASIS (CAPITIS).

1. Always a dry disease.
2. Skin not thickened nor inflamed.
3. Scales easily detached.
4. Disease limited to scalp.
5. Frequently more or less baldness ensues after a time.
6. Hairs surrounded by a scaly sheath.

ECZEMA (SQUAMOSUM).

1. Eruption fades gradually into surrounding skin.
2. Scales thin and scanty.
3. Presence of moisture at some stage.

(PSORIASIS).

1. Patches of eruption sharply defined.
2. Scales thick and abundant.
3. Eruption always dry.

ECZEMA (SQUAMOSUM).

4. Lesions change in character from time to time.
5. Scales small and yellowish.
6. Intense itching.
7. Patches of eruption large and irregular.
8. No seat of predilection.
9. No uniformity of lesions.
10. Considerable induration of patches.
11. Ears and face frequently attacked in eczema of the scalp.

ECZEMA (PAPULOSUM).

1. No desquamation.
2. Lesions remain papular for weeks.
3. Severe itching.
4. Papules rounded and more or less acuminate.
5. Papules rounded in outline.
6. Color of lesions bright red.
7. Lesions irregularly arranged.
8. Little or no subsequent pigmentation.
9. Papules often unite, losing their identity.
10. Health remains good in most cases.

PSORIASIS.

4. Eruption remains the same from week to week.
5. Scales large and pearl-like.
6. Itching less severe.
7. Patches of eruption smaller and round.
8. Seat of predilection on knees, elbows, etc.
9. Great uniformity of lesions.
10. Less induration but great vascularity.
11. When affecting scalp, usual limited to hairy parts, just extending to the edge and limited by an abrupt line of demarcation.

LICHEN RUBER (PLANUS).

1. Desquamation.
2. Remain papular for months.
3. Usually slight itching.
4. Papules flat or slightly depressed in the centre.
5. Papules have a peculiar squarish or angular outline.
6. Color of lesions dull red or violaceous.
7. Lesions sometimes seem to follow nerve trunks.
8. Lesions leave some pigmentation or staining.
9. Papules retain their individuality, although forming patches.
10. Health often impaired.

ECZEMA (SQUAMOSUM).

1. Redness occurs in patches.
2. Intense itching and some burning.
3. Scales small and bran-like.
4. Scales form slowly.
5. Skin infiltrated and thickened.
6. Exudation present at some period.
7. Scales not very abundant.
8. Affection common.
9. General health remains good.

PITYRIASIS RUBRA.

1. Uniform redness.
2. Slight itching and no burning.
3. Scales large and papery.
4. Scales reproduced rapidly.
5. Skin not infiltrated.
6. Process always a dry one.
7. Scales very numerous.
8. Rare disease.
9. Severe constitutional disturbance after disease has lasted some time.

ECZEMA SQUAMOSUM.

1. Eruption usually irregular in shape.
2. Margins ill defined.
3. Scaling bran-like and abundant.
4. Not contagious.
5. Irregular character of eruption.
6. Does not heal from centre.
7. Usually a chronic affection.
8. Non-parasitic disease.

TINEA CIRCINATA.

1. Eruption circular in form.
2. Margin well-defined and raised.
3. Slight shreddy desquamation.
4. Communicable.
5. Eruption ring-shaped.
6. Tendency to heal from centre.
7. Disease runs an acute course.
8. Presence of mycelium under the microscope.

ECZEMA (PUSTULOSUM.)

1. Non-parasitic disease.
2. Not communicable.
3. No peculiar odor.
4. Exudation purulent.
5. Hairs appear normal.
6. No permanent loss of hair.

FAVUS.

1. Peculiar vegetable parasite to be found in abundance under microscope.
2. Contagious.
3. Lesions have a characteristic mouse-like odor.
4. Exudation, dry and powdery, canary yellow lesions cup-shaped.
5. Hairs brittle, dry and wiry.
6. Eruption gives rise to scars and alopecia.

ECZEMA (PUSTULOSUM).

7. Eruption never ends in ulceration or cicatrization.
8. Crusts moist and sticky.
9. Acute course of disease.

ECZEMA (PAPULO-PUSTULOSUM.)

1. Non-parasitic disease.
2. No burrows.
3. Not communicable.
4. Vesicles and pustules confluent.
5. Eruption sudden and not progressive.
6. Vesicles clear.
7. Pruritus less severe.
8. No special seat of election.
9. Scalp may be affected.
10. Individual lesions usually small.
11. Vesicles usually rupture.

ECZEMA (ERYTHEMATOSUM.)

1. History frequently of eczema.
2. Eruption limited in extent.
3. Patches of eruption quite large.
4. Intense itching.
5. Lesion bright red color.
6. Usually accompanied by other forms of eczema.

FAVUS.

7. Disease may result in cicatrization.
8. Crusts dry and friable.
9. Very chronic affection.

SCABIES.

1. Presence of parasites.
2. Presence of burrows.
3. Very contagious.
4. Vesicles papules and pustules discrete.
5. Eruption progressive.
6. Irregular dots on vesicles.
7. Itching intense, especially at night.
8. Lesions found especially between fingers; on flexor surface wrists; on anterior fold of axilla; about nipples; on shaft or head of penis; buttocks; popliteal spaces.
9. Disease very rarely affects scalp.
10. Vesicles and pustules often very large.
11. Vesicles do not rupture spontaneously.

SYPHILODERMA (ERYTHEMATOSUM.)

1. History of chancre.
2. Eruption diffuse.
3. Individual lesions small.
4. Rarely much itching, if any.
5. Coppery fawn or pale rose color.
6. Presence of other syphilitic symptoms.

ECZEMA (ERYTHEMATOSUM).

7. Slight scaling, but no pigmentation.

8. Skin thickened.

ECZEMA (PAPULOSUM.)

1. History of eczema.

2. Eruption usually limited in area.

3. Superficial eruption.

4. Eruption usually moist at one time or another.

5. Severe itching.

6. Lesions less distinct.

7. Vesicles not unfrequently associated with papules.

8. Lesions more acute and active.

9. Lesions tend to group and unite.

ECZEMA (SQUAMOSUM).

1. History of eczema.

2. Eruption superficial.

3. Intense itching.

4. Eruption moist at one time or another.

5. Eruption red in color.

6. Scales abundant and thick.

7. Infiltration less marked and inflamed.

8. Margins indistinct and not abruptly elevated.

9. Heals first at edges.

10. Lesions active and inflammatory.

11. No secondary lesions except large painful glands in neighborhood of eruption.

12. Eruption has an irregular outline.

SYPHILODERMA (ERYTHEMATOSUM).

7. No scaling, but pigmentation.

8. No induration of skin.

SYPHILODERMA (PAPULOSUM.)

1. History of syphilis.

2. Eruption extensive.

3. Eruption deep seated.

4. Eruption dry from the first.

5. Little or no itching.

6. Lesions have a firm, shotty feel.

7. Distinctly papular.

8. Lesions chronic and passive.

9. Lesions usually discrete.

SYPHILODERMA (SQUAMOSUM).

1. History of syphilis.

2. Eruption deep seated.

3. Slight itching.

4. No discharge.

5. Eruption ham-colored.

6. Scales scanty and thin.

7. Infiltration of skin marked and cellular.

8. Margin elevated and well defined.

9. Tendency to heal at centre.

10. Lesions passive and but slightly inflamed.

11. Presence of secondary lesions.

12. Tendency to occur with circular outline.

ECZEMA (PUSTULOSUM).

1. History of eczema.
2. Often itching.
3. No bad odor.
4. No ulceration.
5. No scarring.
6. Eruption usually confluent in large patches.
7. Scales less prominent and never stratified.
8. Vesicles present at some stage.
9. Eruption develops rapidly and disappears sooner.
10. Crusts moist.
11. Scales less adherent.
12. Absence of secondary lesions.

SYPHILODERMA (PUSTULOSUM).

1. History of syphilis.
2. Itching absent or moderate.
3. Odor very disagreeable.
4. Ulceration under crusts.
5. Lesions leave scars.
6. Lesions discrete or form small irregular patches with circular outline.
7. Scales prominent and often in the form of rupia (oyster-shell like).
8. Pustules usually occur alone.
9. Lesions develop slowly and last long.
10. Crusts dry.
11. Scales adherent.
12. Presence of secondary lesions.

In a work like the present it is obviously impossible to do more than indicate, in a general way, the plans of treatment suitable in the various forms of eczema. The reader is referred to the larger works on skin diseases, and especially to the various monographs, as those of McCall Anderson and Bulkley, which deal with the subject in a more comprehensive manner.

Eczema is a perfectly curable disease, but for its relief both internal and external remedies must at times be employed. Constitutional remedies judiciously employed are almost always needful, and prove of decided benefit in the majority of cases. In some cases, as where the eruption is local and due to some external irritant, or where it is exceedingly limited in extent, no internal measures are called for. The subject of diet must be carefully attended to; all articles which are difficult of digestion must be avoided, and especially salt or pickled meats, pastry, cabbage, cheese and beer, or wine.* The bowels should be carefully regulated; dyspepsia is often the sole exciting cause of eczema, and the physician who desires to treat this affection in

* See Appendix, on Diet in Diseases of the Skin.

any of its forms with success, should be prepared to deal with dyspepsia in the majority of cases. The condition of the kidneys should be looked into. Diuretics are frequently of value. Saline laxatives are frequently called for in the treatment of eczema, and among these the following tonic aperient, to which the name of "Mistura ferri acida" has been given, is one of the best:—

R. Magnesii sulphatis, ℥j
 Ferri sulphatis, ℥ss
 Sodii chloridi, gr. x
 Acidi sulphurici dil., f℥j
 Infus. quassiae, . . . ad f℥iv. M.

SIG.—A tablespoonful in a tumbler of water, before breakfast.

This preparation, though extremely disagreeable on first taking, becomes much less revolting after using for a short time, and even delicate women can take it readily. It is important that the full quantity of water should be taken, as the volume of fluid seems to influence the action of the medicine. Sometimes hot water is less unpalatable with this mixture than lukewarm or cold water. In some cases, especially in winter time, the proportion of magnesium sulphate must be increased. The laxative mineral spring waters, as the Hathorn and Geyser springs of Saratoga, or the Friedrichshall, Hunjadi Janos and Ofener Racoczy, among German mineral waters, the latter mentioned in the order of their increasing purgative properties, are beneficial in many cases. I like the Hunjadi Janos best for most cases, and I sometimes prescribe it after a short course of the *mistura ferri acida*, as its use can be kept up indefinitely without an increase of dose. In infantile eczema, where constipation exists, the simple unsipped syrup of rhubarb, in repeated small doses alone or with magnesia, is often found desirable. A very good powder (though powders are disagreeable prescriptions for children, I know not what to substitute for this) is the following:—

R. Hydrarg. chlor. mite, gr. vi-xij
 Pulv. rhei, gr. xviii
 Magnesiae calcinat., ℥ss.

M. In Chart. No. vj div.

SIG.—One, at night.

This is for an infant six months to a year old, of average strength. In weakly infants the dose of calomel and rhubarb should be slightly reduced. The powder should be continued until its effect is seen. Purgation, however, should not be induced. A somewhat similar prescription, without the mercurial, and in a fluid form, is the following:—

R. Pulv. rhei,
Sodii bicarb., aa \mathfrak{z} j-ij
Aquæ menth. pip., f \mathfrak{z} iv. M.

SIG.—A teaspoonful, after meals.

In adults, especially when the eczema is acute, and occurs in a robust, sthenic individual, the laxative treatment is best introduced by a brisk mercurial purgative. Especially is this the case when the patient is suffering from constipation when first seen. Here the bowels are to be thoroughly unloaded, to begin with, and then we may enter upon the more direct treatment of the disease. It is wonderful to see what a good effect two or three compound cathartic pills, or six grains of blue mass, given the evening before beginning the administration of *mistura ferri acida*, will have on the patient's comfort, external and internal. Some good authorities, I know, deprecate the employment of cathartics in the treatment of eczema, but the general experience is in favor of thus beginning the treatment,—in acute inflammatory eczema, be it understood,—and this is certainly my advice. Afterward let the case be treated internally, on general medical principles, and let cathartics and laxatives be given or withheld, as the patient's condition suggests. In old persons, particularly when the patient has been a high liver or is rheumatic, or in those unusual cases where a gouty element may exist, diuretics and alkalies are indicated. In such conditions the following prescription was recommended by the late Tilbury Fox:—

R. Magnesii sulphat., \mathfrak{z} iv
Magnesii carbonat., \mathfrak{z} j
Tinct. colchici., mxxxvj
Ol. menth. pip., mjj
Aquæ, f \mathfrak{z} vij. M.

SIG.—Two tablespoonfuls in a wineglass of water, every three or four hours.

The following formula, suggested by Hardaway, has been found useful:—

R. Ol. morrhue, f $\frac{3}{4}$ iv
 Pancreatin saccharat., $\frac{5}{8}$ j
 Pulv. acaciæ, q. s.
 Glyceriti hypophosphiti,
 Syr. calcis lactophosphatis,
 Aquæ, aa f $\frac{3}{4}$ iv
 Ol. gaultheriæ, gtt. xxx. M.

Ft. Emulsio.

SIG.—Tablespoonful three times a day, after meals.

The acetate and carbonate of potassium in full doses, and also the alkaline mineral waters, may be employed. In persons of debilitated constitution or in scrofulous persons, particularly in the badly-nourished children of tuberculous parents, cod-liver oil is demanded, and iron in various forms is to be recommended in some cases. The following prescription is one which I often employ with satisfaction:—

R. Tinct. ferri chlor., aa f $\frac{3}{4}$ j
 Acidi phosphorici dil., ad f $\frac{3}{4}$ iv. M.
 Syrupi limonis, ad f $\frac{3}{4}$ iv.

SIG.—A teaspoonful in a wineglass of water, after meals.

Syrup of the iodide of iron and wine of iron are also eligible preparations, particularly for children. Quinine and strychnia are sometimes called for by the general condition of the patient. Arsenic is useful in a limited class of cases, more especially in the chronic papular form and the squamous stage of the affection. In former times the use of arsenic in eczema of all grades and varieties was much abused, and even now it too often forms a part of that routine treatment which is the refuge of ignorance. Frequently, so far from doing good, it does harm by upsetting the stomach, and its use is particularly pernicious in the acute and inflammatory forms of the disease. Tar has been used in some chronic cases internally, with benefit. Sulphur-spring waters are also said to be useful occasionally. I have no personal experience with regard to these latter remedies.

Regarding the local treatment of eczema, ordinary water may be employed for washing purposes, in most cases; when the

skin is delicate and sensitive, distilled water or water made milky by the addition of some bran or starch. A very good method of softening the water, particularly where it is to be applied to the face, is to take a handful of bran, sew it up in a small linen bag, and squeeze the bag, like a sponge, through a basin of water until the water is quite milky. This gives a soft and agreeable quality to the water when it is applied to the skin. The water may be used cold or warm, as best suits the feelings or fancy of the patient; but the most important point is not to use too much of it or too often. The best rule for the use of water in eczema is to use it as seldom and as sparingly as possible. The only two indications for its employment are either the removal of crusts or the cleansing from absolute and unendurable assuiment; water sometimes seems to act upon the eczematous skin almost like poison. White castile soap is ordinarily the only soap necessary to cleanse the skin of crusts and scales, but occasionally the stronger potash soaps, the ordinary household soft soap, or the "sapo viridis" of Hebra, must be brought into use. Sometimes the "spiritus saponis kalinus," or solution of two parts of sapo viridis in one part of alcohol, may be used instead of the solid soaps. Whatever soap is employed, it should always subsequently be completely washed off the skin, unless a distinctly macerating or caustic effect is desired.

The local treatment of eczema is of great importance; many cases can be cured by outward applications alone, and there are very few where these can be dispensed with entirely. Before instituting local treatment, the part affected should be examined, with the view of determining whether the disease is acute or chronic, and what the characteristic lesions, the amount of heat, redness, swelling, etc.; and also the condition of the epidermis, whether intact or torn and abraded. It is most important, also, to take into consideration the area involved, whether this be great or small, for not only must we be on our guard not to use irritant remedies, but it must be remembered also that some applications are poisonous by absorption, when applied over large raw surfaces.

In most cases of eczema there are certain secondary products, crusts, scales and extraneous matter, which must be removed before the local remedies can be advantageously applied. Sometimes it is difficult to get patients to remove these extraneous matters; a feeble attempt is made, giving rise, perhaps, to pain or slight bleeding, and the statement is offered that the "scab" cannot be gotten off. The mass of rancid grease, decomposing pus, serum and sebaceous matters, mingled with epithelial debris, make a very poor covering, however, for an abrasion or ulcer which is to be healed, or to which local treatment is to be applied successfully. The physician should give the most precise directions as to the method of removing the crusts or, better, should, when practicable, remove them himself. Soap and water alone will not do this. Poultices made with hot almond oil, applied to the crusts after these have been themselves thoroughly saturated with the oil, will often suffice. At other times, compresses wrung out of hot water and covered with oiled silk will do better. Frequently a strong solution of carbonate of sodium, also applied on compresses, will soften crusts more rapidly than anything else. Sapo viridis spread on linen rags, like ointment, laid on the skin and covered with waxed paper or oiled silk, will soften the most stubborn crusts. Crusts in the scalp sometimes cling stubbornly, on account of the numerous hairs running through them. By lifting the edge gradually, and cutting away the hairs from underneath, the crust can be lifted expeditiously and without pain. I dwell on this little point because I have so often seen well directed treatment fail of its intention, because the way had not been prepared for the local remedies.

Two general principles may be mentioned with regard to the local treatment of eczema. These are, first, that in the acute form the treatment can scarcely be too soothing; secondly, that in the chronic form the treatment can hardly be too stimulating. Of course, these general principles must be modified somewhat, according to individual circumstances, especially with regard to the latter.

Acute Eczema. When a remedy is to be applied for the first time to a case of acute eczema, it is usually better to use it over a limited area until its effect is perceived, for it must be borne in mind that a remedy which has been of service in one case will not necessarily suit another, even when the general features of the disease are the same. If one remedy does not suit, another must be tried, for it is often difficult to decide beforehand what application will be most useful. The indication is to give ease to the patient, and medicaments must be changed, if necessary, until this end is attained.

In acute vesicular or erythematous eczema, water is, as a rule, injurious, and irritates the skin. It should never be used, except in cases of extreme necessity, for the absolute needs of cleanliness. Patients, especially those belonging to the more refined classes, will sometimes rebel when, for instance, they are desired to abstain from washing the face; but occasionally uncleanliness, or what passes for such, must be enforced. In the place of washing, the affected part may be powdered, from time to time, with a dusting powder, such as the following:—

R.	Pulvis camphoræ,	ʒ ss	
	Pulvis zinci oxidi,	ʒ iss	
	Pulvis amyli.	ʒ vj.	M.

The following plan of treating acute vesicular eczema is that of Dr. James C. White, of Boston, which I have used in hundreds of cases with great satisfaction. I consider it, perhaps, the best treatment for the majority of cases in the early acute stages of eczema. The affected part is to be bathed with lotio nigra, the "black wash" of every day use, either in full strength or else diluted with an equal part of lime water, and daubed over the surface by means of a rag or mop (not a sponge, as this absorbs the sediment), or applied by means of cloths saturated with the wash and allowed to remain on the surface. As a substitute for the ordinary wash, the following, nearly the same in character, may be used, especially on the face, as it clings better to the skin:—

R.	Hydrarg. chlor. mite,	gr. lxxx	
	Mucilago tragacanthæ,	ʒvj	
	Liquoris calcis,	ad . . .	ʒ viij. M.

After the wash has been applied for some minutes, oxide of zinc ointment, or in winter the following :—

R. Pulv. zinci oxidi, gr. lxxx
 Ung. aquæ rosæ,
 Vaselini, aa ʒiv. M.

is applied gently with the finger, before the surface has had time to dry; and this treatment is repeated at intervals of a few hours. As a rule the itching and burning is relieved at once, and occasionally the disease is arrested in its course. Sometimes the wash may be applied every half hour or hour, the ointment being laid on at longer intervals. I have often found the following lotion useful; it is to be applied on cloths :—

R. Liq. plumbi subacetat dil., Oss
 Glycerinæ, f ʒss. M.

When there is a good deal of inflammatory action, and when the skin is thickened and more or less doughy and œdematous, I am in the habit of employing bread poultices, made of bread crumb mixed with ice-cold lead water. The sedative effect of this application is sometimes extremely soothing and grateful. The following lotion is highly recommended in some cases :—

R. Pulv. zinc. carb. præcip., ʒij
 Pulv. zinci oxidi, ʒss
 Glycerini, ʒij
 Aquæ, f ʒvj. M.

It should be applied frequently, by means of a bit of rag or a rag mop, the sediment being allowed to remain on the surface.

Another very good remedy, in my experience, and one particularly adapted to the treatment of eczema covering a considerable surface, is the following :—

R. Ext. grindeliæ robustæ, fld., . . f ʒss ad f ʒij
 Aquæ, Oj. M.

This is preferably applied on cloths, which are permitted to remain in contact with the surface until nearly or quite dry, before removal. A lotion of sulphate of zinc, fifteen to thirty grains to the pint of water, acts admirably in some cases, espe-

cially in eczema about the hands. When itching is a severe and prominent symptom, applications of hot water, or of cloths wrung out of the same and applied in quick succession, as hot as may be borne, to the affected side, often allay this exasperating symptom when all else has failed. Carbolic acid, which is one of the most efficient anti-pruritics, can rarely be employed in the acute stages of eczema, but now and then, when burning is less prominent as a symptom, and when itching is most tormenting, it is of use. I often combine it with black wash, as thus:—

R.	Acidi carbolici,	ʒ ij-iv	
	Glycerinæ,	f ʒ j	
	Lotio nigræ,	℥j.	M.

I find that the erythematous forms of eczema, when the skin is yet unbroken, and when there is at the same time more or less inflammatory infiltration, is that in which carbolic acid is likely to agree. It must be applied with caution, however, in the acute stage of eczema, until it is found to agree with the individual case under treatment.

While, as a general thing, ointments are not found to agree in acute eczema, yet in a certain number of cases these preparations appear to suit better than lotions. The oxide of zinc ointment, that hard-ridden and universal remedy for skin diseases, here finds its legitimate sphere. Bulkley recommends that instead of being made with lard it should be made with cold cream, and should contain sixty instead of eighty grains of the oxide of zinc to the ounce. Both of these changes are, I think, improvements. Practically, I find the oxide of zinc ointment, as dispensed, too thick and almost tough, especially for winter use in this climate. So, for convenience sake, I ordinarily prescribe it mixed with an equal weight of vaseline or cosmoline. It should not be benzoated, or if benzoin is used it should be used in small quantity. The unguentum aquæ rosæ is a much better base for all or almost all ointments than lard or vaseline. The lard is apt to turn rancid, while the vaseline is too thin for ordinary use, although preferable, on this account, for use in the hairy parts.

Oleate of zinc, originally brought into notice by Crocker, of London, in 1878, enters into the composition of a number of ointments which are of frequent value in the treatment of acute eczema. It is made as follows: Take one part of oxide of zinc, and eight parts of oleic acid; stir together; allow to stand two hours; heat until dissolved. On cooling, a yellowish-white, hard mass results, which may be variously made into ointments. The following is one formula:—

R. Zinci oleat.,
Olei olivæ aa ℥iv. M.

Or it may be made up with cold cream:—

R. Zinci oleat.,
Ung. aquæ rosæ, aa ℥iv
Olei amygdalæ q. s. M.

Oleate of bismuth acts in very much the same manner. The following formula, brought into notice by Dr. McCall Anderson, is an elegant preparation when prepared with due pharmaceutical skill:—

R. Bismuthi oxidi ℥j
Acidi oleici, ℥j
Ceræ albæ, ℥iij
Vaselini, ℥ix
Ol. rosæ, ℥ij. M.

Subnitrate of bismuth is a very agreeable and slightly astringent as well as sedative remedy, when used in the form of ointment.

The following—

R. Pulv. bismuth subnitrat., ℥ss-℥j
Ung. aquæ rosæ, ℥j. M.

is an excellent application in acute eczema of the scalp, particularly in children.

Diachylon ointment, made according to the formula of Hebra, with due care, and by a skilled pharmacist, is of all ointments the most grateful and soothing to the inflamed skin. I have, however, frequently met with disaster in having this ointment made up by chance apothecaries, or at long intervals. I give the method of its preparation here, so that any one who may be

fortunate enough to be able to depend upon first-class and conscientious pharmaceutical skill may have recourse to this prince of ointments. It is composed as follows :—

R. Olei olivæ opt., f 3 xv
 Pulv. lithargyri, 3 iij-3 vj
 Aquæ, q. s.
 Coque. Fiat unguent.*

Diachylon ointment is usually more effective when spread upon cloths than when rubbed in with the finger, and, in fact, the same may be said of all ointments applied with a view to their soothing effect. I usually bid the patient cut out bits of soft linen cloth to fit the part to be covered, and then to spread the ointment upon these as thick as butter upon bread. When applied, they should be covered with oiled silk or waxed paper, for cleanliness sake.

An ointment similar to the diachylon ointment may be made by adding two or three parts of olive oil to four of diachylon plaster, the two substances being melted together, and stirred until cool. The proportion of oil used will, of course, vary

*The following directions are taken from Duhring: "The oil is to be mixed with a pint of water and heated, by means of a steam bath, to boiling; the finely-powdered litharge being sifted in and stirred continually; the boiling is to be kept up until the minute particles of litharge have entirely disappeared. During the cooking process a few more ounces of water are to be added, from time to time, so that, when completed, water still remains in the vessel. The mixture is to be stirred until cool. The ointment is difficult to prepare and requires skillful manipulation. When properly made it should be of a light yellowish grey color, and of the consistency of butter. To ensure a good article it is essential that the very best olive oil and the finest litharge be employed."

To this I would add that the physician should examine each lot as made up, when this is possible, and he should in all cases decline to employ any ointment which has been on hand over a week. Although one of the most perfectly soothing and sedative of all ointments, unguentum diachylon is probably more apt to be ill-made or decomposed when dispensed, than any other, and it behooves the physician to look carefully after his prescription if he desires to avoid a possible catastrophe to his reputation.

with the weather. I do not often use this preparation, as it is apt to be tough and stringy. It is what the average apothecary dispenses, however, when unguentum diachyli is prescribed, and is, I am sorry to say, now officinal.

Among other soothing dressings may be mentioned, finally, cold cream, cucumber ointment, glycerole of starch, almond and olive oils and dilute glycerine. The olive oil must be pure and of good quality; the peanut oil often supplied in its place is irritating, I think. I may also remark, that while glycerine in full strength disagrees with many skins, yet, where diluted with one to three parts of water, it will almost invariably be found to agree.

In papular eczema, the eruption being more discrete and scattered, the applications to be made must differ somewhat in form from those employed in vesicular eczema. Lotions are usually preferable, and in many cases, where the individual lesions are widely separated, these alone are admissible. Then, too, the inflammation is of a different character, and pursues, as a rule, a more chronic course. Soothing applications, therefore, do not often come into use, and we are more apt to have recourse to stimulant remedies, as the so-called anti-pruritics, and chiefly tar and its derivatives. Carbolic acid is the most important and generally useful of these remedies, and the one most apt to do good in papular eczema. The formulæ given just above will be suitable for many cases, only substituting water for the lotio nigra, and increasing the proportion of the carbolic acid when the skin will bear it.

A further account of the treatment to be employed in acute eczema will be found under the head of the treatment of eczema attacking particular regions of the body.

Chronic Eczema. In some cases the treatment employed in the acute stage of eczema may also be made use of in the chronic condition of the affection; more frequently, however, other and more stimulating remedies will be found more serviceable.

Carbolic acid may be employed, either in the form of a lotion,

as above, or as an ointment, of the strength of five to twenty grains to the ounce of oxide of zinc ointment, benzoated lard or vaseline. It may be relied upon as an anti-pruritic remedy when all others fail, and is a most valuable application in chronic eczema. Thymol, in the form of an ointment or lotion, in the strength of five to twenty grains to the ounce, is recommended by some writers. I have had very little experience with it. Tar and its preparations come largely into use in the treatment of chronic eczema. The tarry preparations must be handled with care, however, for, if used injudiciously, or in too great strength, they are apt to inflame the skin and retard the process of cure. They are most apt to be useful when the disease has completely reached the chronic stage, and when there is more or less infiltration. In using tar in the form of ointment, which is ordinarily the most convenient form of employing this remedy, its strength should at first rarely exceed one to two drachms to the ounce. It can be increased later, if the skin requires and will bear increased stimulation. The two forms of tar commonly employed are the *pix liquida* of the *Pharmacopœia* and the *oleum cadini*. Their effect upon the skin is apparently identical. A very convenient formula is the following:—

R.	<i>Ol. cadini</i> ,	℥ ss	
	<i>Ung. aquæ rosæ</i> ,	℥ j.	M.

On the scalp, fluid or semi-fluid preparations are usually more convenient than ointment; the following formula is recommended by Duhring:—

R.	<i>Picis liquidæ</i> ,	℥ j	
	<i>Glycerinæ</i> ,	℥ j	
	<i>Alcoholis</i> ,	℥ j	
	<i>Ol. amygdalæ amaræ</i> ,	℥ xv.	M.

I often use the oil of cade mixed with three or four parts of alcohol or of oil of almonds, as an application in some forms of eczema of the scalp. These preparations are not to be smeared on the surface, or applied on cloths, as the soothing remedies. Much of their efficacy depends upon their proper and thorough

application ; they must be worked into the skin, in order to produce their full effect ; patients and attendants should be especially instructed on this point. In thick old patches of chronic disease, the following preparation may be thoroughly rubbed in by means of a little mop of rag or candlewick tied to the end of a stick :—

R. Picis liquidæ,
Saponis viridis,
Alcoholis, aa ʒij. M.

This preparation is known under the name of “tinctura saponis cum pice.” To produce a stronger impression, caustic potash may be used instead of the soap, in the proportion of five to fifteen grains to each ounce of the mixture. The following preparation, known as “liquor picis alkalinus,” was introduced to the notice of the profession by Dr. Bulkley :—

R. Picis liquidæ, ʒij
Potassæ causticæ, ʒj
Aque, fʒv. M.

The potash is to be dissolved in the water, and gradually added to the tar with rubbing in a mortar. Of course, this preparation is much too strong to be used undiluted, excepting in the rarest cases. As a lotion, it may be diluted with from eight or more parts of water at first, down to two parts after a little trial ; care should be taken not to make the lotion too strong at first. The liquor picis alkalinus may also be combined with ointment, from one to two drachms to the ounce.

Soaps play an important part in the treatment of some forms of eczema. In ordinary cases, plain white castile soap is all that is required for cleansing purposes ; and the less soap that is used beyond what is necessary for this purpose the better, as a general thing. Strong alkaline soaps are used in eczema, for this remedial effect, being particularly employed when some infiltration is to be removed, or when a stubborn and rebellious local patch of disease requires strong stimulation. Of these, the most generally useful is that known as “Hebra’s soap,” “green soap,”

and after a few days' use should generally be substituted, for a time at least, by some other preparation. A combination of the officinal tar and sulphur ointments sometimes acts happily in old chronic eczemas with much itching and infiltration. Boric and salicylic acids have been highly recommended by authors of repute during the past few years. As to the former, I have used it in saturated solution in the eczema of infants with satisfaction; but have not had much experience in its employment elsewhere. It would seem more useful in the acuter forms of eczema. The following paste containing salicylic acid is a very excellent preparation, but, like the boric acid solution, is perhaps better fitted for employment in the acute than in the chronic forms of eczema. It will come into use very conveniently in that class of cases where ointments are indicated, but where there is some idiosyncrasy which precludes their use:—

R. Acidi salicylici, gr. x
 Pulvis zinci oxidi,
 Pulvis amyli, āā ʒ ij
 Vaselini, ʒ iv. M.

This is an excellent ointment for use in hot weather. In winter it is a little stiff, and I think the proportion of starch might conveniently be reduced for cold weather.

A few years ago Mr. Squire, of London, brought forward the preparation known as glycerole of the subacetate of lead, as a remedy in chronic eczema. His formula is as follows: Acetate of lead, 5 parts; litharge, $3\frac{1}{3}$ parts; glycerine, 20 parts, by weight. Mix and expose to a temperature of 350° F., and filter through a hot water funnel. The clear viscid fluid resultant contains 129 grains of the subacetate of lead to the ounce. This is used as a stock, from which the preparations employed are made by dilution with simple glycerine. I have used this preparation quite extensively in the treatment of chronic eczema rubrum of the legs, particularly when the disease is extensive, of a dusky red hue, accompanied by weeping, oedema and a varicose condition of the veins. Also in eczema of the palms and soles. In eczema of the legs the glycerole stock may be

used diluted with three parts of pure glycerine. Strips of linen soaked in this preparation are applied to the affected limb, and covered with wax paper and a bandage, the dressing being changed once or sometimes twice daily. This method of treatment may be employed to advantage in many cases when the treatment by means of *sapo viridis* and *unguentum diachyli* cannot be carried out. In eczema of the palms and soles the following ointment gives good results:—

R. Glycerol. plumbi subacetatis, f ʒss
 Glycerinæ, f ʒiss
 Ung. aquæ rosæ, ʒj
 Cereæ albæ, q. s. M.

This is to be made into a tolerably firm ointment, and applied to the affected parts. It is better to precede its use with the application of solutions of caustic potash, and it should be spread thickly upon narrow strips of linen, and placed in close apposition to the affected parts, being covered with wax paper, to prevent soiling.

For obstinate, circumscribed patches of eczema, blistering with cantharidal collodion will sometimes be found beneficial. With the same object, strong solutions of carbolic acid in alcohol, tincture of iodine, and solutions of nitrate of silver, or even the solid stick, may be employed. Vulcanized india rubber has been used extensively in the treatment of eczema, and may be employed with advantage, both as a protective against atmospheric influences, as a preparative for other applications, and as a direct therapeutic agent. In the form of Martin's solid rubber bandage, it is of great use in varicose eczema rubrum of the leg. It is apt to give rise to great itching, and even pain, when applied continuously upon the lower limbs, and for this reason it is well to have the bandage applied in the morning on rising, and to be worn during the day only. On retiring at night, the bandage is to be removed, and the limb plunged quickly into water as hot as can be borne. Removed from this in a few moments, it is wiped gently dry and the surface dusted with starch powder, and loosely covered with linen cloth for the

When the itching is very severe, a carbolic acid lotion may be used, or the powder. Under this treatment rapid improvement is usually observed: and sometimes no further treatment is required. Rubber cloth in sheets, rubber matts, and rubber clothing are often employed in the various forms of eczema.

Having now seen of the acute and chronic forms of eczema, we may now advantageously next consider this disease in its various localities.

Eczema of the Scalp.—This is very rare: when it does occur it is usually of the pustular or squamous. Its history in these cases will be given under another of the points mentioned in the preceding chapter, and so lead to its diagnosis.

Eczema of the Face.—This is usually erythematous, vesicular, or squamous. The first variety rapidly runs into the squamous, the face being more or less covered with red, scaly patches, which are very itchy. The pustular variety is common among children. The pustules commonly come out in great numbers about the hair follicles. They soon rupture, and the liquid, drying over the skin, forms yellowish-green crusts, sometimes forming thick masses. The hair becomes matted and the scalp, if not cleansed, gives out a very offensive odour. The disease, unless checked by proper treatment, may last for several weeks even to years. The itching is usually not so severe as in other forms of eczema. Sympathetic enlargement of the lymphatic glands about the back of the neck is very common in this form of eczema, and in some cases the enlargement gives rise to great anxiety on the part of the patient. The glands never suppurate, and the patient's anxiety is relieved with confidence, that, as the irritation subsides, the scalp subside, the glandular engorgement will disappear. Small abscesses often commonly form upon the scalp in unhealthy children. Pediculi are not infrequently present, and the scalp should be examined for them in all cases of pustular eczema.

A patch of pustular eczema occurring in the occipital region, especially in neglected and ill-nourished children, almost invariably points to the presence of pediculi as a cause. When present, they should at once be removed by the means described under *Pediculosis capitis*.

Eczema of the scalp may be confounded with psoriasis, seborrhœa, favus, syphilis and tinea tonsurans. From psoriasis of the head eczema may be distinguished by the symptoms mentioned in the general diagnosis of the disease. Pityriasis sometimes resembles eczema capitis very closely, but the pearly color of the scales and the not unfrequent combination of more or less seborrhœa with the pityriasis, making the scales greasy, as also its diffusion, and the history of the case, are important elements in distinguishing eczema from this disease. Other points have been touched upon earlier. Pustular eczema alone is likely to be mistaken for favus, but the mustard or canary color of the favus crusts, their commonly cup-shaped outline and the dry, pulverulent consistence of the masses of fungus, together with the microscopic appearance, will be sufficient to distinguish it from eczema. As before mentioned, certain syphilitic diseases of the scalp may be mistaken for eczema. The history of the case, with the characteristic symptoms above given, are ordinarily sufficiently distinctive. Erythematous or squamous eczema may sometimes be mistaken for tinea tonsurans. The patches of eczema, however, are not attended with loss of hair. In ringworm of the scalp the hairs are broken off uniformly about an eighth or a quarter of an inch beyond the scalp. The hair has a nibbled appearance. The patches in ringworm are apt to be roundish in outline. In eczema they are irregular. The color of the scalp is of a leaden hue; while in eczema it is reddish, and has more the appearance of inflammation. The itching in eczema is marked. In tinea tonsurans it is slight. A history of contagion is frequently found in connection with tinea tonsurans.

The treatment of eczema capitis will, of course, depend upon the variety and stage of the affection in each case. In pustular eczema the crusts must first be removed by means of hot water

and soap, preceded, if necessary, by thorough saturation with olive or almond oil, to soften and loosen the crusts. Sometimes the scalp must be well saturated with oil and covered with a cap over night; and perhaps the process must be repeated; at all events, the crusts must be removed before any applications are made. Occasionally the oil alone appears to exert a curative influence, but usually more decided treatment is required. The hair in children, boys and men may be cut short, especially when lice are present. In women this sacrifice is not necessary, and should not be permitted. Now and then, however, we meet cases where women are suffering with severe and neglected eczema due to pediculosis of long standing, and where the hairs are so matted and glued together that we are obliged to have recourse to the scissors.

As to medicinal applications: in inflammatory cases black wash or one of the carbolic acid lotions may be applied with a sponge or cloth for ten or fifteen minutes at a time, morning and evening, and these may be followed each time by an oily preparation. If ointments can be used, the following are of value:—

R. Bismuthi subnitrat., $\frac{3}{4}$ j M.
Unguent. petrolii, $\frac{3}{4}$ j.

Or this:—

R. Hydrarg. ammoniat., gr. x-xx
Unguent. petrolii, $\frac{3}{4}$ j. M.

The following is somewhat more stimulating. It appears to have a drying effect when there is discharge:—

R. Hydrarg. chlor. mite, gr. xx-xl
Unguent. petrolii, $\frac{3}{4}$ j. M.

A small portion only should be applied at once, but this should be rubbed in thoroughly. When a stimulant effect is desired, an ointment of the red oxide of mercury, ten to twenty grains to the ounce, may be employed. The ammoniated mercury ointment is particularly useful, in cases where the eczema is due to the presence of lice.

When still stronger stimulation is required, especially when exudation has ceased, and the scalp is red and scaly, one of the following ointments may be employed:—

Or,	R. Ung. hydrarg. nitrat.,	$\frac{\text{ʒ}}{3}\text{j-iv}$	M.
	Ung. petrolii,	$\frac{\text{ʒ}}{3}\text{iv}$.	
	R. Picis liquidæ,	$\frac{\text{ʒ}}{3}\text{j}$	M.
	Vaselini,	$\frac{\text{ʒ}}{3}\text{j}$.	

As these cannot be applied when the hair is long, a fluid preparation must be employed:—

R. Ol. cadini,	$\text{f}\frac{\text{ʒ}}{3}\text{ss ad f}\frac{\text{ʒ}}{3}\text{j}$	M.
Ol. amygdalæ,	$\text{ad f}\frac{\text{ʒ}}{3}\text{j}$.	

Alcohol may be substituted for the oil when the hair is quite thick. In some cases, when there is scaly eczema of the scalp with some tendency to greasiness, and the occurrence of seborrhœa, the following ointment acts happily:—

R. Acidi tannici,	$\frac{\text{ʒ}}{3}\text{j}$	M.
Ung. petrolii,	$\frac{\text{ʒ}}{3}\text{j}$.	

When the hair is long, glycerine and alcohol in equal proportions, may be substituted for the vaseline.

Eczema of the Face. This form of eczema is more apt to be met with in children (see *Eczema infantile*), but is also found in adults, on the cheeks and elsewhere. The form of eczema found in adults is usually the erythematous, on the cheeks, nose, forehead, and sometimes extending around to the ears and down the neck. The skin becomes bright or dusky red, with intense burning and some itching. It becomes thickened, infiltrated and stiff, with some scaliness. This form of eczema is more apt to occur in winter, and among persons exposed to cold and wind. In addition to such general means of treatment as are called for by the patient's condition, active local measures should be used. Lead-water lotions are valuable in the acute stage, and also black wash. Black wash should be sopped on the skin, or laid on by means of rags saturated with it, and renewed hourly. This may be followed by an ointment, especially if the

patient must move about and cannot keep the wash in contact. The following is a very good preparation :—

R.	Pulv. zinci oxidi,	℥j-℥ij	
	Sevi purificati,	℥ij-℥ij	
	Adipis,	℥iv-℥ij	
	Pulv. ulmi fulvæ,	q. s.	M.

Or oxide of zinc ointment with equal part of vaseline may be employed.

In order to protect the skin from cold air, which is poisonous when the skin is in this condition, I am accustomed to recommend the use of the following paste :—

R.	Tragacanth,		
	Glycerinæ, aa	℥iv	
	Sodii biborat.,	℥ss	
	Aquæ destillat.,	q. s.	M.

With these materials, a thin, adherent, quickly drying paste may be made, with which the skin of the face may be painted just before going out of doors. This is almost or quite invisible, and yet acts as a perfect protective. On returning home it may be washed off readily with a little warm water, and then the lotions and ointments may be applied. This is worth remembering, because not every one can stay at home, day after day, and keep applications constantly to his face, and it is well to be prepared with some such alternative, which if it does little good yet prevents much harm to the skin.

As soon as possible the soothing applications should be changed for lotions and ointments containing tar and carbolic acid. The carbolic acid wash may be tried even when the eruption is at its height, being more apt to be useful if itching, rather than burning, should be the prominent symptom. The formula is given on page 142. Water may be substituted for the lotio nigra.

The proportion of carbolic acid may be increased or diminished as the case requires. There is a solution of coal tar which is known as "liquor carbonis detergens," and which is miscible with water, which is an excellent lotion for use in this form of eczema; it should be employed in the proportion of one part to

eight of water or stronger. When ointments are borne, the following is useful in very many cases. I almost always try it before using other preparations :—

R. Picis liquidæ, ʒss-3ij
Ung. aquæ rosæ, ʒj. M.

Now and then fissures and cracks form in the infiltrated skin, especially about the alæ nasi. The following pigment is very efficient in healing these, and may often be used as a protective over other parts of the face, where there is no objection to the discoloration :—

R. Ol. cadini, ʒj
Liq. gutta perchæ, seu collodii, ʒj. M.

Let a brush be put in the cork, and let the patient paint the skin over several times a day. This pigment has the advantage over ointments, that it cannot be rubbed off.

Another excellent ointment in erythematous eczema of the face is this :—

R. Ung. hydrarg. nitrat.,
Olei cadini, aa ʒj
Pulv. zinci oxid., ʒss
Ung. aquæ rosæ, ad ʒj
Ol. rosæ, q. s. M.

Eczema of the lips is ordinarily accompanied by swelling, redness, heat, infiltration, slight scaliness and fissures. The muco-cutaneous surface of the skin outside may be attacked, and the symptoms and treatment differ according to the seat of the eczema. Eczema of the lips is to be distinguished from herpes and syphilis. Herpes runs a distinct, short course, and is composed of discrete, well-marked vesicles or groups of vesicles. Eczema is more obstinate, and covers a larger surface. Syphilis occurring about the mouth usually either assumes the form of circumscribed, more or less irregular erosions on the inside of the lip, or else is seen localized in the angles of the mouth, forming a more or less deep fissure and secreting a puriform fluid. Eczema of the lips, especially when occurring on the muco-cutaneous surface, is difficult and painful to treat. Solution of potassa,

twenty grains to the ounce, is of use when there is infiltration. The muco-cutaneous surface should be carefully dried before it is applied, and afterward, to prevent running. Ordinarily, milder preparations are best. The following is a useful combination :—

R. Acidi phosphorici, dil.,
Glycerinæ,
Syrupi, aa f℥ ss. M.

SIG.—Apply to parts three times daily.

The same formula, with the addition of enough water to make six ounces, may be given simultaneously in teaspoonful doses thrice daily. When a dry, wrinkled, scaly condition exists, G. H. Fox suggests the use of an ointment containing five grains of thymol to the ounce of cold cream.

When the outer edge of the lip is affected, the following ointment is useful :—

R. Zinci oxidi,
Mellitis, aa ℥ ij
Olei amygdalæ, ℥ vj
Cere flavæ, ℥ ij. M

In winter a condition analogous to eczema produces annoying fissures of the lip, which may be treated by moistening the fissure and applying a pointed stick of nitrate of silver. Afterward the compound tincture of benzoin may be painted on as a protective. Another procedure in chronic cases is to forcibly tear open the crack a short distance and then rub in, by means of a bit of stick, a minute quantity of strong red oxide of mercury ointment (forty to sixty grains to the drachm).

There is a form of eczema occurring on the upper lip, about the opening of the nostril. This has been considered under eczema of the nares.

Eczema of the eyelids often occurs in scrofulous and badly-nourished children, and less frequently, among adults also. The follicles of the eyelashes are involved, small pustules forming, which dry into crusts, gluing the edges of the lids together. These are usually more or less red and swollen. Conjunctivitis may or may not be present. The treatment varies, according to

the severity of the case. Mild cases require no more than the application of a weak nitrate of mercury ointment, made of the officinal ointment diluted with three to six parts of cold cream, or an ointment of ten grains of red oxide of mercury to the ounce of cold cream. In severe cases the eyelashes should be extracted, the edges of the lids carefully dried and then touched with a camel's-hair pencil moistened with a drop of a ten-grain-to-the-ounce solution of caustic potassa. This application is to be wiped away immediately and the effect neutralized by the application of cold water. The operation may be repeated every day until the infiltration, exudation and itching subside, after which one of the stimulating ointments just mentioned may be used to complete the cure; or as suggested to me by Dr. Risley, a small portion of the following ointment may be applied on the inside of the lower lid with a spatula and gently worked over the insides of the closed lids with the aid of the finger:—

R. Hydrarg. oxid. flav., gr. j
Vaselin, ʒj. M.

Eczema of the *nares* deserves special mention. Hardaway points out that we have two distinct clinical and pathological conditions in many cases, eczema and inflammation of the vibrissæ, which latter is in effect a folliculitis barbæ, and to which the name *Eczema sycosiforme* is sometimes given. When simple eczema of the nares exists, a similar inflammation is not unfrequently present in the upper portion of the nasal passages, and this complicates the condition, which is apt to be stubborn to treatment. The mucous membrane of the nasal passages is in its upper portion, so far as the unaided vision can reach, dry, red, and glazed. Near the nasal orifice excoriations and even shallow ulcers are sometimes met with, and the passages are apt to be clogged up with dried crusts. Children, particularly strumous and ill-nourished infants, are most commonly the subjects of this form of eczema, which is to be carefully distinguished from syphilitic nasal disease, both by the history of the patient, the absence of concomitant syphilitic eruptions or other symptoms,

and the fact that the disease is always more superficial in eczema erosions, if present, being shallow and secreting serum and mucus rather than pus.

The local treatment of this form of eczema consists in first softening any crusts which may obstruct the nostrils, by painting with a soft camel's-hair brush, or dropping into the nostrils warmed olive or almond oil. When the crusts are thoroughly softened, they can easily be removed, but no force must be used. The orifices are then gently anointed with some soothing or slightly stimulant and astringent ointment, as the McCall Anderson's bismuth ointment (see page 143), or the following, as suggested to me by Dr. Harrison Allen:—

R. Pulv. iodol., gr. x
Vasellini, ʒ ij. M.

The latter may be applied with a camel's-hair pencil at point beyond the reach of the finger.

When the vibrissæ are affected, a sort of blind boil may arise just within the nares, accompanied by intense pain and tension and usually resulting in resolution without suppuration. The parts being rigid, there is no room for extension of the inflammatory process. The outside integument of the nose often becomes red and subsequently desquamates.

The disease process may run its course in a few days, or, by the extension of the inflammation to new follicles, may drag on over several months. Sometimes one is consulted rather for the redness of the nose than for the actual disease in chronic cases.

The affection appears to attack persons who have become worn out by fatigue, mental strain or worry. Although not strictly speaking an eczema in this form, yet it is so closely connected with the eczematous inflammation as to deserve mention here.

Hardaway recommends cod-liver oil emulsion (see page 137) internally, preceded, in some cases, by the sulphide of calcium, in one-tenth grain doses every three hours. Locally, one part of glycerine to two parts of Squires' glycerole of the subacetate of lead applied freely, by means of a camel's-hair pencil

to the inside and outside of the nose. Fomentations of water as hot as can be borne may be applied several times daily, and the hairs should be plucked from the inflamed follicles. Local depletion may be required. Later, Hardaway suggests the ointment of the glycerole of lead (page 151). In severe, long-continued cases, where relapses are common, the hair papillæ may be destroyed by electrolysis.*

Eczema of the beard is sometimes excessively stubborn and annoying. Pustules, usually seated about the hairs, form with great rapidity and persistence, and are followed by yellowish or greenish crusts, often matting the hairs together. Usually the affection is confined to a limited locality, as the corner of the upper lip, near the commissure, or just at the opening of the nostrils; but occasionally the whole beard may be involved, and the disease may extend to other parts of the face. In this respect the affection differs from sycosis (see *Sycosis*), which is always limited to the hair follicles. The latter is also a deep process involving the follicles themselves, while eczema barbæ is essentially superficial, occupying the surface of the skin alone and taking in the hair follicles only incidentally. Papules and tubercles, not uncommon in sycosis, are absent in eczema barbæ. The two affections do, however, often resemble one another very closely.

Tinea sycosis (see *Tinea sycosis*) is sometimes mistaken for eczema barbæ; it is important to distinguish between the two diseases. Crusts are generally abundant in eczema; in tinea sycosis they are generally (though not always) scanty. When the crusts are removed the eczematous surface is smooth, while in tinea sycosis it is rough, uneven, tubercular and lumpy—a very important point. The hairs in eczema are usually firm in their follicles, and the attempt to remove them causes pain, even when there is a good deal of suppuration about the root. In tinea sycosis, on the other hand, the hairs come away without the least pain or difficulty; they are often crooked, but are usu-

* Patients must be given to understand that this procedure results in scarring and permanent alopecia.

ally quite smooth and dry, while the hairs of eczema are surrounded by the glutinous root sheath. Above all, the hairs in tinea sycosis almost invariably contain the characteristic fungus (see *Tinea sycosis*); besides which, the source of contagion in this highly contagious disease can frequently be traced out. Finally, patches of characteristic ringworm not unfrequently can be seen on the neighboring skin.

The treatment of eczema of the beard should be prompt and energetic. The crusts must first be removed with oil or poultices followed by soap and warm water, and then the beard must be carefully shaved. This is a painful operation when first performed, and patients often rebel against it. It is well to be firm, however, and it is sometimes unsafe to take the responsibility of a case, unless the patient complies with these directions. After the first time, shaving is much less painful, and patients do not object. Ointments and applications cannot be brought into intimate contact with the surface when there are hairs growing upon it. In the acute stage, the treatment by *sapo viridis* and *unguentum diachyli*, as described under the general treatment of eczema, is best. Later, a weak sulphur ointment, of one drachm to the ounce, or the sulphur and tragacanth wash (see *Acne*), may be employed.

Eczema of the ears may occur in any form, and may involve either the outside or the meatus. In the acute forms and stages the ears are red and swollen, and they burn and itch severely. The disease, when it involves the meatus, may cause temporary deafness from occlusion by large and abundant epidermic flakes and scales. Ointments, as a rule, are most useful in eczema of the ears, though in the acute vesicular form, black wash, or the other washes, may first be employed, as in the general treatment of acute eczema. When there is a deep crack behind the ear, of long standing, *sapo viridis* may be briskly rubbed in, followed by an ointment containing tar or calomel, a drachm to the ounce. This is a good combination :—

R. Picis liquidæ, ℥j
 Ung. zinci oxidi, ℥j. M.

Or calomel may be added to this formula. When the meatus

is involved, ointments, etc., being used, the opening may become gradually clogged with débris, and deafness, often quite alarming to the patient, may result. In these cases the meatus is to be carefully syringed out with warm water, containing a little borax, sodium carbonate, or common salt, in order to remove all the wax, epithelium, grease, etc. Oil of sweet almonds may be dropped into the meatus first, to soften the mass. Care must be taken in these manipulations, and especially in making applications, not to injure the membrana tympani. The crusts being removed, and the meatus gently dried, the affected parts may be touched with a solution of nitrate of silver, two to three grains to the ounce, and dry charpie applied, or if there is much oozing, cold cream in small quantity. If the skin is infiltrated, a solution of potassa, ten grains to the ounce, may be applied, by means of a camel's-hair pencil carefully stripped before introduction, so as not to leave a drop which may run down to the tympanic membrane. These applications may be made every day or two, and as the acute symptoms pass off, an ointment of tannic acid, one drachm to the ounce, may be substituted for the cold cream. In the intervals of this treatment, which must be carried out by the physician, the patient may syringe the meatus out once or twice daily with the following solution :—

R. Acid. carbolic. cryst.,
 Zinci sulphat., aa gr. xij
 Glycerinæ, f ʒ iij
 Aquæ rosæ, ad f ʒ xij. M.

Eczema occurring about the ears, and particularly in the meatus, is apt to be stubborn.

Eczema of the genitals is one of the most painful and distressing forms of the disease. In the male, the penis or the scrotum alone may be involved, or both together. The latter is more commonly the seat of the disease, and the tissues of the skin here become greatly thickened, swollen and infiltrated. Moisture, crusts, and painful fissures along the folds of the skin are often present. Itching is a severe and prominent symptom, and the disease is apt to be very chronic. In the female the labia and

even the vagina may be invaded. The affection here is even more distressing than in the male. Itching is violent and causes extreme misery. The diagnosis is not difficult. Pruritus alone is apt to be mistaken for eczema of the genitals, and here the absence of visible primary lesions will decide the character of the case. The itching comes first in pruritus, and then the skin is torn and bleeding, from the scratching.

Sometimes eczema of the genitals yields quickly to treatment; this is when it is recent and superficial; chronic eczema with thickening and infiltration is often obstinate to an extreme degree.*

In the acute and superficial form, simple or medicated warm baths are often grateful and give much relief. The following is a fair sample of the method of making up these baths:—

R.	Potassii carbonat.,	iv
	Sodii carbonat.,	ij
	Pulv. boracis,	ij. M.

Dissolve in a quart or so of water; add four to six ounces of dry starch, placed beneath the water in the hand, which is then opened and beaten through. Six to eight ounces of glycerine may then be added if thought desirable, and the whole mixed in with about thirty gallons of hot water in a long bath tub. The patient remains in the bath for fifteen to twenty minutes. On coming out the parts are to be carefully dried without rubbing, and then at once thickly dusted with powdered subnitrate of bismuth, or wrapped up in an ointment composed of one part of cod-liver oil to two parts of suet.

When baths cannot be taken, or even when these are employed, it will often be found advantageous to use lotions of lead water or black wash, or the fluid extract of *grindelia robusta*, two drachms in a pint of water. If the patient is obliged to go about his work or business, it will be well, if he be a man, that the part be wrapped or supported in fine linen wrappings, to pro-

* Diabetes should be suspected in severe cases of eczema of the genitals, and the urine should be examined (see *Diabetes, Skin Diseases in*).

tect it. One of the various dusting powders, as nitrate of bismuth, lycopodium, magnesia, etc., may be dusted on, or if powders are found too drying, a little vaseline may be smeared over the surface. In both men and women it is important to keep adjacent parts separate from one another, as the heat and moisture engendered infallibly make the disease worse.

Where there is infiltration the treatment must be different. Whatever applications are made, however, will do more good if the parts are first bathed with water as hot as can be borne. The *sapo viridis* and *unguentum diachylon* treatment, described above, under the head of general treatment, is a most excellent method for use in chronic and indurated eczema of the genitals, when it can be had. When there is considerable itching carbolic acid wash—acid carbolic, ℥iij; glycerine, ℥j; aquæ, Oj—is of advantage. It is particularly useful in eczema of the female genitals, and its application, which may be practiced at intervals of a few hours, should be preceded, when possible, by bathing with hot water. In eczema of the scrotum, when there is much itching, the following application may be employed:—

R. Argenti nitrat., gr. x-xxx
Spiritus æth. nit., f℥j. M.

This is to be painted on the parts, and will serve to protect them; if found too stiff, some ointment may be applied as soon as the pigment is dry. Stimulating ointments, mercurial, tarry, etc., as given above, may be employed from time to time, as required, and one thing should be tried after another until relief is gained; for in this form of eczema, more than in any other, perhaps, the treatment must, of necessity, be largely empirical and tentative.

Eczeema of the anus is not very common—pruritus of this region being usually mistaken for this disease—but when it occurs, may cause much infiltration and fissuring, with not unfrequently involvement of the neighboring parts. It usually assumes the erythematous form, and when fissure results great pain is experienced on defecation. On account of this, consti-

pation from over-retention of the fæces is commonly present, with the effect of heightening the discomfort and pain caused by the passage of the stools. Itching and burning sensations, worse at night on going to bed, and in severe cases pain on defecation—these are the chief symptoms of eczema ani. The treatment is, in general, the same as that of infiltrated eczema in other localities. Tar ointments in various proportions are very useful. The following formula gives the tar in the least offensive form possible—

R. Picis liquidæ, 3j
 Medullæ bovis, 3vj
 Cereæ albæ, 3j
 Ol. rosæ, m℥v. M.

Almond oil containing twenty per cent. carbolic acid forms a cleanly and not disagreeable application. It may be rubbed in with the fingers every night on retiring. Even when the muco-cutaneous surface is abraded and fissured, this oil gives relief, while many applications pain severely. When there are deep fissures, these should be split open and touched with the nitrate of silver stick, the tar ointment being subsequently applied. The parts should be kept scrupulously clean, and the patient should be exhorted not to scrape and dig at the skin, but to fly to his ointment or oil when the attack comes on, and especially to keep these close at hand when undressing for the night. If there is any tendency to congestion and moisture about the nates and perineum, these should be powdered with starch or astringent powders. Aperients, by permitting the passage of the fæces in a softened condition, and also possibly by relieving the circulation in the hemorrhoidal veins, may often be of service.

Eczema intertrigo resembles erythema intertrigo (see *Erythema intertrigo*), but shows the characteristics of eczema. The parts should be dusted frequently with astringent powders, kept from rubbing, if possible, by the interposition of lint or cloth, and rest, when possible, should be enjoined. Sometimes astringent lotions are useful.

Eczema of the breasts may occur about the nipple or on the lower edge of the breasts. The former variety is often brought about or kept up by nursing. The diagnosis, especially from syphilis and from *Paget's Disease* (see *Paget's Disease of the Nipple*), which is very important, is to be made by exclusion. Eczema occurring in this locality shows the infiltration, redness, exudation, burning, itching, etc., characteristic of the affection. The *sapo viridis* and *unguentum diachylon* treatment, or that by solutions of caustic potassa, is the best when there is much infiltration. The treatment in every case should be decided and vigorous. When fissures of the nipple occur in nursing women, leaden shields may be used and the cracks in the nipple moistened, touched with nitrate of silver stick (an excessively painful operation for the moment), and painted with compound tincture of benzoin. By this means cracks in the nipple can often be healed up while the child is nursing. When eczema occurs about the lower edge of the breast it generally takes on the form of *eczema rubrum* or *eczema intertrigo*, and is in part due to a pendulous condition of the *mammæ*. The usual treatment of lotions, black wash, astringent powders, and the interposition of lint or absorbent cotton will work a cure.

Eczema of the umbilicus is usually moist and fissured. A disagreeable odor generally accompanies the affection in this locality, and there are scales and crusts. The disease is apt to be mistaken for syphilis if it occurs only in this locality, but in syphilis ulceration usually takes place, and the smell is more than disagreeable; it is positively offensive. The little pit should be kept thoroughly clean, and the diseased part should be painted every day or so with a solution of nitrate of silver four to ten grains to one ounce, and then the sides kept apart by dry cotton.

Eczema of the legs is a very common form of the disease, especially among old people. The erythematous and vesicular varieties are commonest at the beginning, but these soon change to *eczema rubrum* or weeping eczema. The affection occurs in one or more patches of various size, the whole leg being not unfrequently involved. When it comes under notice it has gener-

ally lasted some time; the skin of the leg is smooth, shiny, dusky red or violaceous and unbroken; or it may be moist and weeping, or covered in part or wholly with scales and crusts. There is always a good deal of thickening and infiltration, with burning and itching to an extreme degree. Varicose veins often accompany this form of eczema, and varicose ulcers are not uncommon. Eczema rubrum sometimes occurs in elephantiasis of the legs; here it is secondary to the other affection. The diagnosis of eczema of the leg is not difficult. Ulcers, when present, are to be distinguished from syphilitic ulcers. The treatment of eczema of the leg must vary with the nature of the case. In moist, weeping eczema the *sapo viridis* and unguentum diachylon treatment is the best when it can be carried out. Next to this is the treatment by means of glycerole of the subacetate of lead. Both forms of treatment have already been described. Of late I have used, with great satisfaction, a paste suggested by Unna. It is composed as follows:—

R. Kaolin.,
 Ol. lini. (seu glycerinæ), . . . āā . . . ʒvj
 Pulv. zinci oxidi,
 Liq. plumbi subacetat, . . . āā . . . ʒss. M.

This forms a thick, creamy liquid, which dries with tolerable rapidity on exposure to the air. It is best preserved in a bottle with a large brush in the cork. This prevents evaporation and permits the ready application of the remedy. A thick coating is painted on the skin and allowed to dry, which usually occurs in a few moments, or if it does not dry quickly enough a little powdered kaolin or starch may be dusted over the surface by means of a wisp of cotton. A bandage is then applied firmly from the toe to the knee, and the dressing allowed to remain in place for twenty-four hours. At the end of that time, the bandage being removed, the dried paste can be readily detached. When it sticks closely to the skin it is better not to tear it off, but to paint over the whole limb. This process is repeated daily, the area covered diminishing with the healing up of the disease, until, finally, pigmentation occurs.

An excellent treatment for chronic eczema rubrum of the leg, complicated as this so often is by ulcers, is the following:—

After cleansing the ulcer from all débris, secretion, etc., it is covered with powdered iodoform thickly dusted on. The whole area of eczema around the ulcer and extending to the entire limb if required, is then painted with the following:—

R. Pulvis zinci oxidi, ʒij-ʒvj
 Acidi salicylici,
 Acidi carbolic, āā . . ʒij
 Mucilaginis acaciæ,
 Glycerinæ, āā . . ʒxx. M.

The proportion of oxide of zinc may be varied slightly so as to obtain the consistency of thick cream.

After the diseased skin has been well coated with this paint, a double-ended roller bandage is to be applied.

The bandage is to be thoroughly soaked in water and applied while still wet by its middle across the foot just below the instep, the ends being crossed and recrossed at every turn with a half twist. If carefully applied, this bandage may remain in place for several days, or even a week, without arousing any discomfort. It is, therefore, particularly suitable for dispensary patients, and those whose circumstances forbid a frequent visit to the physician.

A long experience in this class of skin diseases has taught me the importance of dressing such cases myself. Franklin used to say, "If you wish a thing done, *go*; if not, *send*." So, with regard to cases like this, if the physician wishes the case properly attended to, let him if possible adopt some form of treatment which he himself can apply, rather than give a number of directions which are rarely carried out. The course of an eczema rubrum of the leg is chronic at best, but the cure may be accelerated to a marked degree by judicious management.

When enlarged or varicose veins occur in connection with eczema of the leg, particular pains must be taken to support the vessels and to give tone to the circulation. The patient should sit or lie with the limb in an elevated position, and should never

permit it to hang down. Walking exercise may sometimes be taken in moderation with benefit, if the limb has been supported by an elastic stocking, or by one of Martin's rubber bandages. Bandages of one kind or another should always be employed in eczema of the leg, both to support the dressing properly, and, as has been said, to give tone to the vessels. Too much stress cannot be laid on the importance of attending to the condition of the circulation in eczema of the leg. The rubber bandage is particularly useful in a limited number of cases, especially when there are ulcers present. It should be applied directly to the limb, care being taken to exercise firm and even, but not too severe pressure. At night the bandage should be removed and dropped into a bucket of cold water, from which it can be removed in the morning and dried previous to re-application. The leg should be dusted with starch, or dried with a towel ; or it may be bathed with hot water or carbolic acid, if there is much itching, and then is to be wrapped up loosely in a muslin bandage, or cloth, for the night. The rubber bandage must be used with caution, and the leg frequently examined by the physician. In careless hands it may do harm by cutting into the skin or by macerating.

Eczema of the hands may attack either the back or the palm. The appearance and course of the disease is so different, however, in one case or the other, that they must be considered separately. Eczema vesiculosum is the variety most common on the backs of the hands, and on the backs and sides of the fingers. Sometimes the pustular variety is found, and occasionally fissured eczema about the knuckles and pulps of the fingers. The vesicular form of eczema is not unlike that found in other localities, excepting that large blebs occasionally form. It may be acute or chronic, and in some cases the nails are also involved in the disease. It is apt to occur as the result of exposure to acids, alkalies, brick-dust, etc. The diagnosis between eczema and scabies of the backs and sides of the fingers and hands is sometimes difficult. In scabies the peculiar burrow of the itch insect, a short, irregularly curved, beaded, black line, a quarter of an inch in

length, is often present, and the vesicles are few in number and scattered. In eczema, on the other hand, the vesicles are numerous and closely grouped. In scabies the vesicles are firm, and usually remain unruptured until they are opened by mechanical means. In eczema the vesicles usually rupture spontaneously, at an early period. The vesicles of scabies commonly exhibit through their summits a fine, dark, irregular line, made up of points, being the original burrow in the epidermis which has been raised by the formation of the vesicle. This is, of course, wanting in eczema. The occurrence of scabies elsewhere over the body will also assist in the diagnosis. Vesicular eczema of the backs of the hands may also be confounded with the rare disease known as dysidrosis or pompholyx. (See *Dysidrosis*.) Eczema of the backs of the hands, and particularly eczema of the fingers, is apt to be very intractable, sometimes recurring every year or oftener, at regular intervals. In the acuter forms of vesicular eczema of the backs of the hands, lotions, as black wash, and particularly a lotion of two to four grains of the sulphate of zinc to the ounce of water, are useful in the more chronic form of the disease. Stimulating ointments commonly answer the best purpose in the chronic form. When the case is chronic and not very extensive, the vesicles may be ruptured by an application of solution of caustic potassa, twenty to forty grains to the ounce, applied with a pointed stick, or brushed quickly over the surface and washed off. The application is to be followed by a soothing ointment. India rubber finger-stalls are sometimes employed with success. Eczema of the backs of the feet differ in no essential from eczema of the backs of the hands. It is less frequent, however, and when it occurs is apt to be less extensive and less rebellious to treatment.

Eczema of the palms and soles presents some peculiar features. Owing to the thickness of the epidermis in these localities, the appearance of the affection is somewhat marked. Infiltration, thickening, more or less callosity, dryness and fissuring mark the disease. It is very chronic and intractable. Sometimes deep and painful fissures occur, and when these are found upon the

feet locomotion is rendered almost or quite impossible. The diagnosis of eczema of the palms and soles is often difficult. It is apt to be confounded with psoriasis and syphilis. From psoriasis, eczema differs in showing, at times, moist and bloody fissures, while those of psoriasis are usually dry, and show little disposition to bleed. The patches of eczema are usually larger than those of psoriasis, and their edges pass gradually into the healthy skin. The patches of psoriasis are smaller, darker, covered with more abundant and paler or white scales. But the best point in diagnosis is the appearance of the disease on other parts of the body. When the palms and soles alone are affected, it is sometimes hardly possible to distinguish eczema from psoriasis. The latter, however, is exceedingly rare, so that the chances are one hundred to one in favor of any given case turning out to be eczema. The diagnosis between eczema and syphilis of the palms and soles is not usually so difficult, although sometimes, when the affection is not found elsewhere, one may be puzzled to come to a decision. The infiltration of syphilis is of a firmer nature than that of eczema; it also extends more deeply into the skin. The patches are smaller and more circumscribed, and sharply defined upon the edge, and they have a tendency to spread upon the periphery and to assume the circinate form. Eczema is usually much more uniformly diffused; it is apt to be of a light color, while syphilis is darker, and sometimes ham-colored. It is also apt at times to itch, while syphilis does not itch. The history, and especially the occurrence of concomitant lesions elsewhere, will often aid the diagnosis.

The treatment of eczema upon the palms and soles must be of the most active and vigorous character, if relief is to be expected. The first point is to get rid of the thick epidermis. This may be accomplished by covering the palm with rags, spread with *sapo viridis* or wet with a five- to ten-grain solution of caustic potassa, and covered with rubber cloth. These are to be kept on day and night, until the epidermis is softened, macerated, and reduced to something like its normal thickness. Then stimulating ointments, containing mercury and tar, may be

employed. When the physician himself can conduct the treatment of the case, the following plan may be employed: Let the affected palm or sole be soaked for some minutes in water as hot as may conveniently be borne; and then, after the superfluous moisture has been hastily removed, let a twenty to forty per cent. solution of caustic potassa be firmly rubbed into the affected skin at all points, by means of a small mop, made of old-fashioned lamp-wick tied to a short stick. If this produces an uncomfortable heat, the surface may be washed with pure, cool water; otherwise, the following ointment is to be applied directly:—

R. Hydrarg. ammoniat.,	℥ j
Adipis,	℥ ss
Sevi benzoinati,	℥ ij-℥ j
Ol. amygdalæ dulcis,	℥ x
Ung. petrolii, ad	℥ vj. M.

It should be spread over the surface, and also laid thickly upon rags and applied; waxed paper being wrapped about each finger and placed over the palm, both for cleanliness' sake and to aid the effect of the ointment. This is to be repeated daily until cracks heal up, the skin becomes thin and supple, and begins to assume a healthier appearance. Then the potassa applications are suspended, and a weak tar ointment—a drachm to the ounce—is rubbed in daily, to complete the cure.

Though the treatment just described is more particularly applicable to the palms, yet it may also be employed upon the soles. However, a better treatment for that form of eczema affecting the thicker skin of the soles is the glycerole of lead treatment, described above.

Of late I have employed the salicylated rubber plasters with very good effect. These are applied in the form of strips, and moulded so as to fit the skin closely, without folds or wrinkles. They may remain on for twenty-four hours to several days, but must be removed when they become loose, or, in any case, after some days. The softened epidermis may then be scraped away, and one of the applications above mentioned may be made. The plaster should then be again applied until the

thickened, horny epidermis is removed to a great extent, after which an ointment may be applied.

The treatment of this form of eczema requires even more patience than that of the other forms. Perseverance, however, will finally be crowned by success, unless the patient's general condition should be seriously at fault.

Eczema, when it occurs upon the *nails*, shows them deprived of polish, rough, uneven, and often punctate or honeycombed. The nail becomes depressed, particularly about the root, at which point its proper nutrition is arrested. It may gradually recover its normal condition, or it may be cast off and replaced by a new nail. With regard to treatment, tar ointment, one drachm to the ounce, applied about the root, with the internal administration of arsenic, promise the best results. Treatment, however, not unfrequently seems to be entirely without effect. Eczema of the back of the fingers is frequently accompanied by disease of one or more nails, which passes away with the eczema or soon after.

Eczema in Infants. Infants are liable to eczema from the first weeks of extra-uterine life, the chief differences between the disease as shown in these cases and as it manifests itself in later life being, on the one hand, the restricted causes which may give rise to the disease, and on the other hand, the different appearance of the eruption, dependent upon the peculiar structure of the skin in early life. Eczema in infants and in young children is due either to digestive disturbances, to teething, or to that inherited weakness of constitution and poor nutrition generally attributed to the scrofulous habit. Bottle-fed infants are most apt to suffer from indigestion, and these are also most liable to the eruption of eczema. While too much stress must not be laid upon the irritation of teething as giving rise to eczematous eruptions, yet when the tendency to eczema exists, each tooth, as it comes out, will often be accompanied by an eczematous rash, which fades away as the tooth develops. It will be found, on observation, that the children of parents who suffer from a tendency to phthisis, or who present the symptoms commonly

associated with the idea of scrofula, are most apt to be attacked with eczema, even when fed on the breast and presenting no signs of indigestion. When, as among the lower classes, improper nourishment and bad hygienic surroundings are added, the disease sometimes takes on a quite severe form.

In children who suffer from repeated attacks of eczema, lasting after the period of teething, and without either disturbed digestion or the scrofulous taint to account for the persistence of the disease, the skin will often be found to present that dryness and rough, scaly appearance usually associated with ichthyosis, and the ichthyotic condition will grow more marked as the child grows older.

Moreover, asthma is a not unfrequent complication or accompaniment of the chronic eczema of childhood, and I have seen several cases where eczema, ichthyosis and asthma occurred in the same individual. What the significance of this association is I do not know; it is worthy of further study.

The diagnosis of infantile eczema is usually not difficult. About the buttocks, genitalia and folds of the neck it commonly occurs in the form of *E. erythematosum* or *E. intertrigo*. In the former locality it may be mistaken for syphilis, but the absence of deep infiltration, and, above all, the absence of characteristic syphilitic lesions, whether of the palms and soles or of the body generally, will usually assist the diagnosis. The vesicular and pustular form is that commonly met with upon the cheeks, behind the ears and about the head generally. It sometimes runs on to *E. rubrum*, with very abundant discharge of serum. Occasionally shallow ulcers with crusts form, and in this variety it is at times difficult to say whether we have eczema or syphilis. Especially is this the case when the child is poorly nourished and emaciated. But in syphilis we are apt to have "snuffles," cracks in the commissure of the lips and lesions about the anus; also, some of the lesions are apt to be infiltrated and to show deeper ulceration. Eczema tends to itch to a marked degree, and this alone will commonly distinguish it. Papular eczema is more apt to occur in older children; it may

treatment, and say, "oh, it will get well after teething," is, I think, unjustifiable and cruel.*

Eczema Marginatum. (See *Tinea circinata*.)

Eczema Seborrhœicum. An eruption of the skin closely allied to squamous eczema but involving the sebaceous glands. It was formerly known as "seborrhœa sicca corporis" in this country, and in England as "lichen annulatus serpiginosus." The present title seems, in our knowledge of to-day, perhaps the more appropriate.

The eruption in by far the greater number of cases is confined to the sternal region. Sometimes it is also found between the shoulder blades. Now and then it may be observed spreading toward the shoulders, axillary and sub-clavicular region.

The lesions are made up of more or less greasy, yellowish-brown scales arranged in circles or segments of circles, from a quarter of an inch to an inch in diameter. Sometimes the lesions are discrete, at other times the circles interlace. Few are perfect circles. On lifting up the masses of scales stalactitic prolongations are sometimes found underneath, corresponding to the openings of the sebaceous glands (or, according to Unna, the sweat glands, which secrete oil).

The eruption sometimes itches pretty severely, but usually there is little sensation, and patients commonly seek relief because they fear some unknown evil or are solicitous regarding their physical condition and appearance rather than for relief from annoyance.

Eczema seborrhœicum is apt to be accompanied by pityriasis or seborrhœa capitis.

The diagnosis of the affection is usually easy. The peculiar locality, the ring-like character of the lesions, with their ten-

* So, also, is the refusal to attempt a cure for fear of driving the eruption in, causing fits, etc. (See *Driving in Eruptions*. I had thought of dropping that article in the present edition as dealing with a superstition now obsolete, but I have recently seen statements in medical journals which induce me to retain it.)

dency to heal in the middle while extending on the periphery, the greasy nature of the scales and the benign and trifling character of the disease, are all characteristic. From *pityriasis rosea* (or *P. Maculata et circinata*), the fact that the pityriasis is more widely distributed, affecting the trunk generally and also the limbs, also that the lesions are drier and more furfuraceous without any sebaceous mixture, will aid in distinguishing the affections. Psoriasis is a much more striking affection, the scales more abundant and seated on a more inflammatory base, the distribution more general and the patches larger.

The erythemato-squamous syphiloderm is commonly more abundant and is distributed over the trunk generally, the abdomen being usually the seat of the greater number of lesions. There is not quite so much scaliness in the syphilitic eruption as in eczema seborrhœicum, and the history or some concomitant syphilitic lesions of a characteristic sort are apt to be present.

The treatment of eczema seborrhœicum is local. An ointment of a drachm of precipitated sulphur to an ounce of oxide of zinc ointment, or one of fifteen to twenty grains of the red oxide of mercury to the ounce of lard, faithfully rubbed in once or twice a day, will usually remove the affection.

Elastic Skin Man. (See *Dermatolysis*.)

Electricity in the Treatment of Diseases of the Skin.

In *acne* the faradic current, with the positive pole applied to the nape of the neck and the negative to the region affected, has been found to be a useful adjunct to other forms of treatment. Hardaway believes the galvanic current quite as serviceable. Either pole (it is indifferent which) should be placed in front of the ear and the other passed over the eruption. In *seborrhœa* and *pityriasis* of the scalp Hardaway has employed the faradic current with good effect. The hair should be thoroughly wet, and a moderately strong current should be passed over the scalp for ten or fifteen minutes. In *urticaria* the galvanic and faradic currents, but particularly the former, are excellent palliatives in the distressing eruption. They have no permanent effect, however. The same may be said of *pruritus*. In the acute stage of

herpes zoster, and in the chronic neuralgic condition which often follows, the constant current is of especial value, as pointed out under that affection. *Alopecia* of all kinds is benefited by electricity, notably in the form of faradism. *Scleroderma* and *morphea* have been benefited by galvanism.

The statements just made have been taken from Hardaway's paper on the subject, and, like all statements of this dermatologist, should be given great weight. "Much," as Hardaway says, "may also be said in the negative." In other words, so far we know but little of what he calls the "medical uses of

FIG. 4.



20-CELL CONSTANT-CURRENT BATTERY FOR ELECTROLYSIS.

electricity." It is a subject which seems to promise a profitable result to the investigator, but most of what has been published heretofore on the subject is of but little value.

The conscientious physician must be on his guard respecting the employment of electricity in treatment. Patients, as is well known, expect much from the mysterious effects of this agent, and one is sometimes tempted to employ it as much for the moral effect on the patient as with any well-defined intention or hope of therapeutic effect.

It is quite different with regard to the surgical uses of electricity in dermatology. In employing electricity surgically, the object to be gained is mainly one of destruction. The actual or other cautery would serve this purpose, but the electrical cautery is more cleanly and more easily managed, and in many cases electrolysis, or the destruction of tissues by chemical action, is preferable to the electric cautery. Hardaway, in cases where electrolysis is not applicable, prefers the thermo-cautery of Paquelin to the galvano-cautery. I have had no experience with Paquelin's cautery, but employ the galvano-cautery with entire satisfaction.

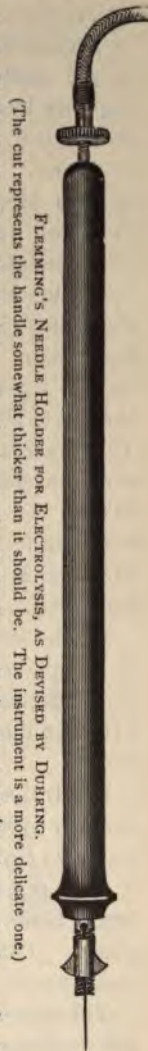
One of the commonest uses of electricity in dermatology is electrolysis for the removal of superfluous hairs. This is performed by the aid of a constant-current battery, using five to fifteen or more cells. The battery I have employed for the past eight years is that made by Mr. Otto Flemming, of this city, and which I have found perfectly satisfactory in every respect. The elements are zinc and carbon; the fluid, bichromate of potassium solution.

I employ a sufficient number of cells to effect my purpose without troubling myself as to the number of milliampères the current measures. Though I am no advocate of rule-of-thumb in opposition to scientific measures, yet in an operation such as the removal of superfluous hairs, I think the educated sense of the operator better than the adjustment of the current by measurement.

The needle holder used in electrolysis is that devised by Dr. Duhring and also made by Mr. Flemming, of which I subjoin a picture.

Other forms are in use probably as convenient for those who prefer them as this. One which has a little button whereby the current may be made or broken with-

FIG. 5.



FLEMING'S NEEDLE HOLDER FOR ELECTROLYSIS, AS DEvised BY DUHRING.

(The cut represents the handle somewhat thicker than it should be. The instrument is a more delicate one.)

out removing the finger from the holder, is very objectionable on account of the pain caused the patient.

The needle used in electrolysis is inserted in a slot at the end of the holder, the two sides of the slot being then brought together by the small screw and nut arrangement depicted. The size of the needle employed depends upon the use to which it is to be put. For the removal of the finest downy hairs the steel needles prepared by Mr. Flemming by grinding down to the extremest tenuity of which the metal is capable are the best. These should only be used in the smallest hair follicles, because their slenderness and sharpness make it difficult to introduce them into the hair follicle without making a false passage. For larger hairs the irido-platinum needles made by the S. S. White Dental Company of this city may be employed. I have not been able as yet to have these made especially for my purpose. They have a sharp little hook at the end, which must be filed off and the end made round before using. These needles are so flexible that they seem to insinuate themselves into the hair follicles, and if they are rounded at the end are not near so apt to make a false passage as the stiffer instruments sometimes employed.

In the destruction of *nævi* larger steel needles may be used. In simple *rosacea* and in *acne rosacea* electrolysis sometimes gives admirable results. It may be employed in the same manner as in the removal of superfluous hairs. (See *Hair, Diseases of*.)

Electrolysis has been employed by Hardaway in *lupus erythematosus* by means of multiple punctures, and by Wende in *xanthelasma* (q.v.).

With regard to the employment of the electro-cautery, a different battery must here be used, one having few cells with large plates. The one pictured here is also made by Mr. Flemming, and I have used it with great satisfaction for several years.

The intensity of the current can be regulated by pressure of the foot upon a treadle, thus leaving the hands entirely free. The conducting cords are attached to the vulcanite holder, here

pictured, so arranged as to receive the necessary knives at the other end.

Held in the hand like a pen, the tip of the index finger is

FIG. 6.



CAUTERY BATTERY.

FIG. 7.



HOLDER FOR GALVANO-CAUTERY KNIVES. ABOUT HALF-SIZE.

found in a position to make or break the current at will by pressure upon a button. Thus with the foot we can regulate the degree of heat to which we wish the knives brought, and with

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found in a position to make or break the current at will by pressure upon a button. Thus with the foot we can regulate the degree of heat to which we wish the knives brought, and with

amount of absorption follows and the venous and lymphatic systems regain tone. An excellent local application at this period is the earth bandage as employed by Hewson, of Philadelphia. This is essentially a Scultetus bandage, on the strips of which has been spread a thin layer of kiln-dried clay earth, made into a thick paste with water. The strips having been carefully applied, a roller bandage is put on to keep them in place, and the limb kept immobile until the clay has dried. The gentle, uniform, but powerful contraction of the desiccating clay makes it one of the most satisfactory dressings which can be applied. A new bandage should be put on daily, and I can testify, from personal observation, to the beneficial effects of this too-little-known plan of treatment. Strips of adhesive or India-rubber plaster may also be used. Later, Martin's rubber bandage may be applied, the limb being first covered with a thin layer of cotton batting. Esmarch's bandage has been used, but I can see very little advantage in its employment, and the loss of tone caused by the sudden emptying of the swollen vessels makes it unlikely that a healing contraction will take place. More probably the flaccid vessels would rapidly enlarge again when the pressure was removed. Some such treatment as this, with rest, is the most appropriate, and should be persevered in as long as it seems to do good. The rest should include repose in a horizontal position, and should, if possible, be continuous. The limb may be bound to a wire anterior splint, such as is used in the treatment of fractures, and then, if this is suspended on a frame over the bed, considerable latitude of movement for sitting up, using the bed-pan, changing the sheets, etc., can be attained without disturbing the dressing.

When eczema, with or without ulceration, is present, some approved local remedies may be used simultaneously with the bandaging, etc. One of the best forms of dressing for an eczematous elephantiasis is that of salicylic paste with the double muslin bandage, applied wet, as described under eczema rubrum of the leg.

There comes a time, however, when this form of compression

ceases to be of benefit, and then the question arises, what further can be done to bring the parts to a normal condition? When the affection is of long standing and a considerable degree of fibrous hypertrophy is present, it must be confessed that the chance of entire restoration is poor. We know of no medicament or application which will cause the absorption of fibrous tissue on such a large scale. When, however, the effusion is slight, or at least when the solid deposit in the tissues is recent, massage will often do much toward causing its absorption. This plan of treatment also has the advantage that it may be employed upon the face, the genitals, etc., where the bandaging processes above described would not be available. There is no question but that the means of treatment at our disposal in elephantiasis of these parts are scanty enough in any case. Electricity, in the form of galvanism, has been employed by Mann in one case successfully. A zinc-carbon battery of sixteen cells was used, and the negative pole, a metal plate, was placed on the sole of the foot, while a moistened sponge, attached to the positive pole, was brushed across the surface of the limb. Internally, quinine may be given during the febrile exacerbations, with a view of abating the fever. Iodide of potassium has also been recommended. Sulphide of calcium has recently been employed in lymph scrotum with marked success. It is supposed to kill the filariæ which may be present in the blood or lymph channels, and in any case is well worth a trial. The dose is three to six grains daily, in divided doses. Change of climate is sometimes of great importance. In cases where the disease has been contracted in a tropical climate, if the person seeks a more temperate region before the hypertrophic condition is far advanced, the attacks of fever often cease, and much may be hoped regarding recovery. On the other hand, if he remains in a tropical climate, repeated exacerbations of fever occur, each followed by a progressive advance in the hypertrophic process, and recovery is almost impossible. Ligation of the femoral artery has been practiced in a number of cases of elephantiasis of the leg.

When the scrotum is attacked, an operation with the knife is the best treatment.

The prognosis of elephantiasis, once fully developed, is unfavorable as regards entire cure. Much may be done, however, in the earlier stages of the disease to arrest its progress. Great deformity attends the disease, the "elephant leg" being a favorite and striking illustration in works on surgery. Elephantiasis scarcely ever terminates fatally, though it is said a fatal result may follow an inflammatory attack in rare cases. For allied affections, see *Fibroma molluscum* and *Dermatolysis*.

Elephantiasis Græcorum. (See *Lepra*.)

Ephidrosis Cruenta. (See *Purpura*.)

Epithelioma of the Skin. Epithelial cancer of the skin may be either *superficial*, *deep-seated*, or *papillary*. The superficial or "flat" epithelial cancer usually makes its appearance as one or more grouped, small, yellowish or reddish papules or elevations, having their seat in the upper layers of the skin. The disease may originate in a sebaceous gland, wart, or other growth, or in the form of a flat infiltration. After a time, it may be months or even years, the tubercle, wart, or infiltration, as the case may be, becomes fissured or excoriated, a slight brownish crust forms upon it, under which is a scanty, watery, or viscid secretion. The course of the disease is slow, but gradually new lesions appear, usually connected with the original one, and finally the tubercles break down, and ulceration of a superficial character sets in. The ulcer, at first small, may spread until it attains the size of a coin, or even of the palm of the hand. The ulcer is characteristic. It is usually roundish, but may be quite irregular, with either sloping or sharply defined edges. The border may be smooth and on a level with the skin, but is usually elevated into a pearly ridge all around the ulcer. Its base is usually hard, and secretes a scanty, viscid fluid; it bleeds readily. There is usually a peculiar and characteristic picking or crawling sensation in the lesion when it first begins to become fissured or excoriated, but there is usually no pain

unless the ulceration is considerable. When fully developed the ulcer may remain *in statu quo* for an indefinite period, the patient's health, meantime, being excellent; or it may pass into the infiltrating, deep-seated variety, to be described. The lymphatic glands are not involved.

Rodent ulcer is a form of this variety of epithelial cancer. Its

FIG. 9.



RODENT ULCER. After Cantrell.

most frequent seat is upon the eyelids, particularly near the inner canthus, and next to this upon the side of the nose. When fully developed it consists of a circumscribed, sharply defined, greater or less excavation, with a brownish-red or purplish-red, dry, or scantily secreting, mammillated surface, the ulcer having often a rolled border. Its course is very slow but relentless; it

invades every tissue with which it comes into contact, including muscles and bones. If neglected, great destruction of the parts may ensue, and even death from hemorrhage in very advanced cases. A peculiarity of this form of epithelioma is, that it is a disease of the upper part of the face, occurring usually above a line drawn across the face horizontally, on a level with the alæ nasi and the lower border of the ears.

Deep-seated Variety. This variety of epithelioma, known also as the "infiltrating" variety, is much more serious than the superficial variety of the disease. It begins as a split-pea-sized tubercle, situated in the skin and subcutaneous connective tissue. It sometimes, however, begins in a wart, like the superficial variety. It is reddish or purplish in color, surrounded by an areola, firm and hard to the touch, and accompanied by infiltration of the surrounding tissues. In a longer or shorter time, according to the malignancy of the case, usually months, ulceration usually begins, either from within or upon the surface, the tumor breaks down, and an ulcer of variable size results. This is deeply excavated, irregular in shape, with a violaceous base, secretes a viscid, offensive fluid, bleeds freely upon being touched, and is surrounded with infiltration, the skin being reddish in the neighborhood. The lymphatic glands become enlarged at a later period, the lancinating pains, which are often experienced from the beginning, become more severe, the patient suffers extremely and finally succumbs through marasmus and exhaustion. The course of this disease, though sometimes slow, is occasionally rapid. Duhring alludes to a case where the disease ran its fatal course in a year.

Papillary Variety. In this variety of epithelioma, the lesion begins as a wart of split-pea size, or occasionally as a raised, lobulated, more markedly papillary formation of larger area. The surface is sometimes covered with dry, horny, epidermic scales, at other times it is moist and macerated. There are usually fissures secreting an offensive fluid, with sometimes cheesy, sebaceous matter. The fungous-looking granulated surface sometimes develops into fleshy protuberances, and at other

times spreads out more flatly. After a time it breaks down into a characteristic epitheliomatous ulcer, running the usual course. Occasionally the papillary growth proceeds from a preëxisting superficial or deep, infiltrated ulcer.

Epithelioma is most commonly met with on the face, either on the lips or tongue, about the nose, the eyelids, the forehead, the temples, or upon the scalp. The genitalia, especially the penis and the scrotum in the male, and the labia in the female, are not uncommon seats of the disease. Epithelioma rarely occurs elsewhere, although it may be found in any part of the body. The lesion is usually single.

The exciting causes of epithelioma are often obscure. Epithelioma of the lip or tongue often starts at a point where the mucous membrane has been irritated by a pipe-stem or a jagged tooth. Chronic pruritus of the anus or vulva and congenital phimosis may in time give rise to epithelioma, which also occasionally originates in cicatricial tissue or in old ulcers. Warts and nævi, both pigmentary and vascular, are structures in which it often originates. The sebaceous warts of old persons seen so frequently upon the face, the backs of the hands and the scapular region often form the starting-point of epithelioma. Tumors of the skin called "benign," as fibroma molluscum, may become transformed into epithelioma. Psoriasis, also, as has been pointed out by Dr. J. C. White, may gradually develop into verruca and then into epithelioma. The curious disease known as "angioma pigmentosum et atrophicum," and which has recently been the subject of a special and exhaustive study by R. W. Taylor, of New York, is allied in some of its aspects with epithelioma, as epitheliomatous growths occur in one stage of the affection in many cases. Lupus and syphilis of the skin may also become transformed into epithelioma. The disease is commoner among men than among women. It is much less malignant than any other form of cancer.

The diagnosis of epithelioma is usually not difficult, excepting in the earlier stages. It may be confounded with syphilitic

out removing the finger from the holder, is very objectionable on account of the pain caused the patient.

The needle used in electrolysis is inserted in a slot at the end of the holder, the two sides of the slot being then brought together by the small screw and nut arrangement depicted. The size of the needle employed depends upon the use to which it is to be put. For the removal of the finest downy hairs the steel needles prepared by Mr. Flemming by grinding down to the extremest tenuity of which the metal is capable are the best. These should only be used in the smallest hair follicles, because their slenderness and sharpness make it difficult to introduce them into the hair follicle without making a false passage. For larger hairs the irido-platinum needles made by the S. S. White Dental Company of this city may be employed. I have not been able as yet to have these made especially for my purpose. They have a sharp little hook at the end, which must be filed off and the end made round before using. These needles are so flexible that they seem to insinuate themselves into the hair follicles, and if they are rounded at the end are not near so apt to make a false passage as the stiffer instruments sometimes employed.

In the destruction of *nævi* larger steel needles may be used. In simple *rosacea* and in *acne rosacea* electrolysis sometimes gives admirable results. It may be employed in the same manner as in the removal of superfluous hairs. (See *Hair, Diseases of*.)

Electrolysis has been employed by Hardaway in *lupus erythematosus* by means of multiple punctures, and by Wende in *xanthelasma* (q.v.).

With regard to the employment of the electro-cautery, a different battery must here be used, one having few cells with large plates. The one pictured here is also made by Mr. Flemming, and I have used it with great satisfaction for several years.

The intensity of the current can be regulated by pressure of the foot upon a treadle, thus leaving the hands entirely free. The conducting cords are attached to the vulcanite holder, here

pictured, so arranged as to receive the necessary knives at the other end.

Held in the hand like a pen, the tip of the index finger is

FIG. 6.



CAUTERY BATTERY.

FIG. 7.



HOLDER FOR GALVANO-CAUTERY KNIVES. ABOUT HALF-SIZE.

found in a position to make or break the current at will by pressure upon a button. Thus with the foot we can regulate the degree of heat to which we wish the knives brought, and with

EPITHELIOMA.

7. Glands (at times) enlarged, painful and inflamed.
8. No induration of adjacent structures.
9. Secretion more abundant, in some cases bloody and purulent.
10. Internal treatment useless; treatment surgical only.

EPITHELIOMA.

1. Disease of adults usually.
2. No accompanying skin lesions.
3. Lancinating pain (at times).
4. Induration circumscribed.
5. Deep ulceration may occur.
6. Loss of substance great where disease has lasted a long time.
7. Ulceration begins at one point.
8. Base deep, with hard elevated edges.
9. Course rapid.
10. Discharge yellow, puriform and offensive.

EPITHELIOMA.

1. History of hereditary tendency or local irritation.
2. Usually months in forming.
3. One point of ulceration.
4. Secretion scanty, bloody and viscid.
5. Surrounding structures infiltrated.
6. Lancinating pain (in some cases).

CHANCRE.

7. Glands enlarged but not painful.
8. Induration of adjacent structures.
9. Secretion scanty and viscid.
10. Internal treatment curative.

LUPUS VULGARIS.

1. Begins in children.
2. Accompanied by papules and tubercles.
3. Little or no pain.
4. Induration diffuse.
5. Ulceration superficial.
6. Loss of substance small.
7. Ulceration begins at several points.
8. Base of ulcer even and granulating.
9. Course slow.
10. Discharge pale, viscid, and not offensive.

ULCERATIVE
TUBERCULAR SYPHILODERM.

1. History of syphilis.
2. Develops rapidly (in weeks).
3. Several points of ulceration.
4. Secretion abundant and yellowish.
5. No infiltration of surrounding tissues.
6. No pain.

EPITHELIOMA.

7. Single deposit of cancer at first.
8. Ulceration most marked in centre.
9. Absence of syphilitic lesions.
10. Treatment entirely surgical.

EPITHELIOMA.

1. History of heredity or local irritation.
2. Usually single.
3. Common seat on face.
4. Begins in the skin.
5. Develops slowly.
6. Ulceration at first superficial.
7. Cicatrix hard and ulcerates easily.
8. Secretion scanty, purulent and bloody.
9. Ulceration begins in skin.

ULCERATIVE

TUBERCULAR SYPHILODERM.

7. Tubercular deposit usually multiple.
8. Heals at centre and spreads by periphery.
9. Presence of other syphilitic lesions.
10. Internal treatment curative.

GUMMATOUS SYPHILODERM.

1. History of syphilis.
2. May be multiple lesions.
3. Not common on face.
4. Begins beneath the skin.
5. Develops rapidly (weeks).
6. Deep ulceration from the first.
7. Cicatrix soft, pigmented and healthy.
8. Secretion gummy and characteristic.
9. Tumors break down before skin ulceration.

The treatment of epithelioma is external and local. The disease is to be removed as soon as the diagnosis is established. The knife, caustic, actual cautery or galvano-cautery, may be employed, as seems most advisable in the particular case. Care must be taken to remove the entire growth, and even to go a short distance into the surrounding healthy tissues. Small and superficial epitheliomata are best removed by means of caustic applications, of which potassa fusa is the best. A stick of caustic potassa is to be wrapped in a rag, leaving only the point exposed, and this is passed over the growth, gently at first, to dissolve the horny epithelium, when this exists, and then the potash stick is to be bored into every part of the substance of the growth. While operating, the unhealthy tissues are found to give way very readily, so that it may easily be perceived, by the increased

resistance offered, when the caustic reaches sound tissue. It must be remembered that the action of the potassa always proceeds a little further after the caustic has been withdrawn. This must be borne in mind when operating in the neighborhood of important organs, as the eye, or where arterial branches may become involved. The application of the caustic potassa gives rise to severe pain, which, however, rapidly ceases after its withdrawal. Of late, pain has sometimes been prevented by applying four to eight per cent. solutions of cocaine to the part before operating. When the effect has proceeded as far as is desirable, dilute acetic acid or weak vinegar, applied on rags, will neutralize the caustic influence, and put an immediate end to the pain. There is rarely any hemorrhage. The part operated on may be dressed with olive oil or some soothing ointment. The dressing is to be changed daily, and the eschar usually falls off at the end of a week or ten days, after which a rapidly granulating surface ensues, ending in an insignificant scar.

Pyrogallic acid in an ointment of the strength of a drachm to the ounce, applied on cloths, from two to six days consecutively, is a good remedy in certain cases, particularly when the patient cannot bear pain. It is usually painless. It may have to be re-applied, from time to time, the slough being cut or scraped away as it forms. Pyrogallic acid should not usually be trusted in the patient's hands, as too much action may be produced, or the effect may penetrate too deeply.

Among other means of removing epithelioma the galvanocautery, especially in operations near the eye, is recommended by those who have used it. Scraping with the dermal curette, or sharp spoon, alone, or followed by the actual cautery, is another mode of removal. For the use of the knife, which is not needed in the majority of superficial epitheliomata, if these are taken in time, reference may be made to the standard works on surgery.

The prognosis of epithelioma is unfavorable, excepting in the small and superficial lesions. Relapses are apt to take place after operation.

Eruptions, Feigned, Factitious or Artificial. (See *Feigned Eruptions*.)

Eruptions, Medicinal. (See *Dermatitis medicamentosa*.)

Erysipelas. An inflammatory, infective disease of the skin, the result of the introduction of a specific microbe, the "erysipelas coccus," characterized by a sharply-defined area of redness, which gradually advances to a larger surface, and is accompanied by relatively intense febrile action, and which generally terminates in complete recovery, with exfoliation of the epidermis upon the surface which was the seat of the disease. In order that the disease shall penetrate the organism, some crack or abrasion of the skin must be present; but external influences have much to do with the production of the disease. It appears to be endemic in some localities, as marshy places and hospitals. I remember that twenty years ago the monthly "house cleaning" at the Pennsylvania Hospital, which was undertaken and kept up for years by the lay authorities in spite of the protests of the physicians and surgeons, was almost invariably followed by the occurrence of one or more cases of erysipelas among the inmates of the wards. Certain individuals are especially disposed to erysipelas. Red or light-haired persons with soft, white skins seem, it is said, to be most prone to frequent attacks of the disease.

The advent of erysipelas is usually announced by the occurrence of an initial chill of a more or less pronounced character. This may vary from a mere feeling of chilliness, which may quickly subside, to a severe rigor, even with symptoms of collapse. The chill is followed by fever, with sometimes an alarmingly high temperature. Delirium, parched lips and tongue, and all the symptoms of a severe disturbance of the vital forces, may be present. Soon the skin symptoms appear near the wound, abrasion or other opening where infection has taken place. It should be said that the initial chill may be absent and the attack may be ushered in by vomiting, the skin eruption forming the first characteristic symptom.

The eruption on the skin or mucous membrane appears in the

form of a red spot, more or less raised above the surrounding surface, with a sharply-defined, often irregular or zigzag, border, which gradually becomes larger by extension of one or more of its boundaries, and thus encroaches more and more upon the healthy skin, from which it is always to be clearly distinguished by its slightly-raised surface, its color, and especially by its sharply-marked contour. The redness of the diseased surface may be more or less vivid in intensity; most commonly it is of a dusky tint. The redness disappears on pressure with the finger, and a temporary depression of the skin is usually formed by the displacement of a certain amount of serous infiltration or oedema in the parts beneath. The redness soon extends rapidly but irregularly, and follows especially those directions in which the skin is loose.

The lymphatic glands of the affected region are usually enlarged, and the lymph channels of the part can sometimes be traced as red lines under the skin, extending from the area of the disease to the neighboring glands.

The erysipelatous process tends to advance from the point first attacked and to migrate to other parts of the surface. Thus I have seen it begin in the face, cross over the scalp from front to back, creep down the neck and shoulders, to terminate about the lumbar region. In severe cases of erysipelas, bullæ and even gangrenous patches, may supervene.

The constitutional symptoms of erysipelas are often severe, though the disease usually follows a mild course. Occasionally a fatal result occurs, usually either from the severity of the primary attack, from exhaustion induced by the continued spread of the inflammatory process and the intensity of the febrile reaction, or from its occurrence as a complication of other serious diseases, or, finally, from some sequela.

Erysipelas is prone to relapse in the same individual. In the milder forms I have seen it occur an indefinite number of times, always starting from the same point, as a chronic ulcer of the face or nose.

Erysipelas sometimes appears to exercise a curative influence

upon certain pathological formations, as glandular carcinoma or erysipelas. The experiments which have been made, however, to utilize this peculiarity of the disease have not been encouraging. Like the spirits said to have been invoked by the magicians of old times, the demon has sometimes overcome his master, and the patient has succumbed to the erysipelas which has been artificially excited.

The treatment of erysipelas should include the isolation of the patient and extreme cleanliness, with disinfection, when necessary, of all his surroundings.

Locally, the greatest variety of applications has been recommended. In addition to the use of antiseptics, such applications should be made as will relieve the tension of the skin.* For further details of treatment, the reader is referred to medical text-books, as my intention in treating of erysipelas in this place is chiefly to aid in the diagnosis of the affection from those other skin diseases with which it is apt to be mistaken.

The following tables will aid in this respect :—

DIFFERENTIAL DIAGNOSIS

BETWEEN

ERYSIPELAS.	ERYTHEMATOUS ECZEMA.
1. Frequently history of contagion.	1. Not contagious, frequently history of eczema.
2. Severe constitutional symptoms.	2. Accompanied by mild symptoms.
3. Intense shining redness with oedema.	3. Less oedema and glossy redness.
4. Creeping eruption, spreading peripherally.	4. Not essentially a creeping eruption.

* Ichthyol has recently been employed as a local treatment with marked success. After disinfection of the wound or other centre of erysipelas, the entire affected surface is painted with an ointment of equal parts vaseline and ichthyol. It is then covered with ten per cent. salicylic lint. The dressing is renewed daily until the skin symptoms abate. On the face an emulsion of ichthyol in collodion may be employed. The treatment is so highly recommended as to be worth a trial. I have not yet had an opportunity to use it.

ERYSIPELAS.

5. Inflammation very acute and deep-seated.
6. Intense burning and little pruritus.
7. Very painful on pressure.
8. No discharge except from ruptured blebs.
9. Vesicles form late.
10. Lasts for a few days.
11. Line of demarcation distinct.

ERYSIPELAS.

1. Usually caused by contagion.
2. Presence of blebs.
3. Desquamation.
4. Skin uniformly red and puffy.
5. Line of demarcation distinct and regular.
6. Constitutional symptoms severe.
7. Eruption frequently limited to face.
8. Burning and painful to the touch.

ERYSIPELAS.

1. History of contagion.
2. Severe constitutional symptoms.
3. Line of demarcation.
4. Deep inflammation.
5. Intense shining redness and swelling.
6. Formation of blebs.

ERYTHEMATOUS ECZEMA.

5. Inflammation less acute and superficial.
6. Intense itching and some burning.
7. Not very painful on pressure.
8. Usually some secretion.
9. Vesicles form early, if at all.
10. Eruption lasts for a week, or more often, months.
11. No line of demarcation.

URTICARIA.

1. Caused by eating fish, oysters, etc.
2. Presence of wheals.
3. No desquamation.
4. Skin irregularly swollen and inflamed.
5. Limit of eruption irregular and indistinct.
6. Slight constitutional symptoms.
7. Not usually limited to one part of the body.
8. Itching and burning, but little pain on pressure.

ERYTHEMA SIMPLEX.

1. Not contagious—history of indigestion, etc.
2. Mild constitutional symptoms.
3. Limit of lesion not distinct.
4. Inflammation very superficial.
5. Skin red, but not swollen or glossy.
6. No presence of blebs.

ERYSIPELAS.

7. Eruption spreads slowly and peripherally from central point.
8. Lesions last for a week or longer.
9. Diffuse redness.

ERYSIPELAS.

1. History of contagion.
2. Acute affection.
3. Tending to spread peripherally.
4. Presence of blebs.
5. Intense shining redness.
6. Line of demarcation.
7. Regularly and abruptly raised outline.
8. Severe constitutional symptoms.

ERYSIPELAS.

1. History of injury or blood poisoning.
2. Eruption limited in extent.
3. Skin is infiltrated.
4. Diffuse redness with blebs.
5. Well-marked line of demarcation.
6. Eruption has shining and glazed appearance.
7. Eruption perfectly smooth to touch.

ERYSIPELAS.

1. Intense and diffuse redness.
2. Redness limited by line of demarcation.

ERYTHEMA SIMPLEX.

7. Eruption appears suddenly without creeping.
8. Lasts but a day or two.
9. Occurs usually in patches.

CHRONIC DERMATITIS.

1. History of injury, exposure, poisoning, etc.
2. Runs a chronic course.
3. Not a creeping lesion.
4. Blebs usually absent.
5. Lesions have a dull, soggy appearance.
6. No line of demarcation.
7. Outline irregular and not abruptly elevated.
8. No constitutional disturbance.

SCARLET FEVER.

1. History of contagion.
2. Eruption spreads over body.
3. Skin not thickened or infiltrated.
4. Diffuse redness with punctated spots.
5. Redness fades off gradually.
6. Eruption has a light scarlet color.
7. Eruption has a slightly rough feel.

HERPES ZOSTER.

1. Redness not diffuse.
2. No line of demarcation.

ERYSIPELAS.

3. Burning and itching sensations.
4. No grouping of vesicles.
5. Eruption not limited to nerve course.
6. Severe constitutional symptoms.
7. Eruption not confined to one side.

HERPES ZOSTER.

3. Severe neuralgic pain.
4. Vesicles appear in distinct groups.
5. Vesicles follow a nerve course.
6. No severe constitutional disturbance.
7. Eruption limited to half of body.

Erythema. Six varieties of erythema may be mentioned: *E. simplex*, *E. intertrigo*, *E. vaccinum*, *E. variolosum*, *E. multiforme* and *E. nodosum*. Of these the first four are simply hyperæmic, with little or no inflammatory exudation, while the last two are characterized by more or less exudation of a plastic character, and are dissimilar enough to demand separate description. The erythemata disappear without leaving any mark or scar.

Erythema simplex is characterized by redness, occurring in the form of variously-sized, diffused or circumscribed, non-elevated patches, irrespective of cause. There are two varieties: the idiopathic, under which head are included the erythemata occasioned by heat and cold, continued pressure or rubbing, and the action of irritant or poisonous substances, as mustard, arnica, various dye-stuffs, acids and alkalies; and the symptomatic, due to some general derangement of the economy, as disorders of the stomach and bowels, etc. Certain general diseases are at times accompanied by hyperæmia of the skin, which shows itself in the form of roundish spots, the size of a pea or finger nail, to which the name *roseola* has sometimes been given. It denotes simply the form of erythema, and in no way indicates the nature of the disease which has brought it forth.

The treatment of erythema must obviously depend upon its cause in any given case. The removal of the obvious cause is alone usually sufficient in idiopathic erythema, but in the symptomatic form of the disease the internal disorder to which the

cutaneous manifestation is due must be diligently sought out and treated, with a view to removal. Locally, soothing and astringent lotions may be employed. A much-used lotion in erythema, when the skin is unbroken, is the following :—

R. Acidi hydrocyanici, dil., ℥j
 Bismuthi subnitrat., ℥j-ij
 Aquæ aurantii flor., f℥iv. M.
 SIG.—Outside use.

The old “calamine” lotion, slightly modified, may also be used :—

R. Pulv. zinci carbonat. præcip.,
 Pulv. zinci oxidi,
 Pulv. amyli,
 Glycerinæ, aa ℥iv
 Aquæ, Oss. M.

Dilute lead water, or lead water and laudanum, or simple alcohol and water, may be used with satisfaction in most cases. As for powders, though useful, they will be found in practice difficult to keep in contact with the skin. Ointments are very apt to disagree in simple erythema, and should, therefore, as a general thing, be eschewed.

Erythema intertrigo is characterized by redness, heat and an abraded surface, with maceration of the epidermis. It occurs chiefly in those parts where the natural folds of the skin come in contact with one another, as about the nates, perineum, groins, axillæ, and beneath the mammæ, and is produced by the friction of two opposing surfaces. It is especially common among fat persons, women with pendulous mammæ, and infants whose skin is tender. The skin feels chafed and becomes hot and sore. Perspiration also, at times, macerates the epidermis, and gives rise to the secretion of an acrid, mucoid fluid. If neglected, a true dermatitis may set in. The affection comes suddenly, and if taken in time may usually be quickly checked, but if not treated it soon becomes very annoying. Occurring between the nates, a common seat of the disease, it may interfere with walking. It is usually harder to cure in infants, where the diaper,

saturated with more or less acrid secretions, is constantly in contact with the skin.

The disease is one of summer rather than winter, although it may occur at any time of the year, if sufficient cause be present. It is sometimes brought on by wearing rough underclothing. I have known severe erythema intertrigo of the nates and thighs caused by walking about, after sea-bathing, in wet bathing clothes. The rough surface of the flannel, as it dries, becomes coated with minute acicular crystals of salt, which cut like tiny knives. The patient sometimes supposes himself to have been "poisoned" by a hired bathing dress, when the cause of his erythema is purely mechanical, as just mentioned.

The treatment of erythema intertrigo is commonly an easy matter. As a rule, very little is required beyond cleanliness and attention. The parts should be washed with cold water alone, or with the sparing addition of castile soap, and dried with a soft rag or towel. The folds of the skin are to be separated and kept apart by pieces of soft linen, lint or absorbent cotton. Dusting powders are the most convenient remedies in most mild cases. When there is little discharge, or none, starch or lycopodium may be used. Starch, however, is apt to cake and sour if dusted on a moist surface. The following powders are much less liable to this objection, and may be used alone or in combination: Oleate, oxide and carbonate of zinc, carbonate and subnitrate of bismuth, magnesia, fullers' earth, kaolin and talc. When starch is admissible, and there is no break in the skin, the following preparation is one of the best:—

R. Pulv. camphoræ, ʒ iss
 Pulv. zinci oxidi.
 Pulv. amyli, āā ʒj. M.

To be made into a perfectly impalpable powder.

The mixture should be kept in a tightly-corked, wide-mouthed bottle.

In cases which are obstinate, diluted black wash, applied several times a day, alone or followed by the use of some bland powder, as above, is an efficacious remedy. Dilute alcoholic

lotions, composed of alum or sulphate of zinc, a few grains to the ounce, also prove serviceable in stubborn cases. In intertrigo about the thighs and genitalia there is often an element of hyperidrosis. In these cases tincture of belladonna may be painted on the parts daily and followed by one of the more astringent powders, as the oxide of zinc. In the case of infants, when the intertrigo is about the anus, and the stools are thin, with an acid smell, the following powder may be given internally:—

R. Calcis præcipitat., gr. iss
 Bismuthi subnitrat., gr. ij
 Sacch. alb., gr. iij. M.

Sig.—One, thrice daily.

When the stools show casein, minute doses of hydrochloric acid may be given.

In addition to the common forms of erythema simplex and E. intertrigo, the following varieties are worthy of special mention:—

Erythema infantile, sometimes called “roseola infantile,” is a not infrequent symptom of gastric disturbance in infants. It also results at times from the presence of worms, teething and various febrile complaints of infancy and childhood. It occurs chiefly on the trunk, both anteriorly and posteriorly, and to a less degree on the face and extremities. The lesions may be split-pea-sized, discrete spots, or a diffuse punctate redness. It is usually very ephemeral. Erythema infantile may be mistaken for scarlet fever or measles, but the absence of high fever and of the characteristic symptoms of the latter affection, as they show themselves elsewhere than on the skin, will decide the question.

Erythema vaccinum, sometimes called “roseola vaccinia,” displays small or large, reddish, erythematous patches over the trunk and extremities. It occurs either on the first or second day after vaccination, or else at the period of beginning maturation of the vaccine vesicle, about the eighth or ninth day, rarely later. There is usually some fever. The eruption may be mistaken for the erythematous syphiloderm, and sometimes patients

imagine that syphilis has been inoculated with the vaccine virus. It is important, therefore, to make the diagnosis. Of course, the history of syphilitic inoculation, with the double incubation period, etc., is conclusive. The dusky red of erythema is also very different from the usual fawn color of the erythematous syphiloderm. (For an account of other eruptions following vaccination, see *Vaccination Eruptions*.)

Erythema variolosum, one of the prodromal rashes of small-pox, is important as an aid to the early diagnosis of the latter disease. It appears as a diffuse punctate redness, or in discrete, erythematous patches, often accompanied by small petechiæ. The characteristic locality of the eruption is over the abdomen and inner side of the thighs, also the flexor surface of the elbows and knees, the dorsal surfaces of hands and feet, the axillæ and a triangular space over the sternum. It sometimes assumes the shape of long stripes over the tendon of the extensor longus of the dorsum of the foot. Rarely this form of erythema may attack the face and extremities. A later form of this variety of erythema may occur during the stage of suppuration and exsiccation. It may be local or may extend over the whole surface, and is apt to be accompanied by redness of the pharynx.

There are certain forms of erythema connected with septicæmic poisoning after operations, etc., also after the inhalation of coal gas.

Erythema Gangrenosum. (See *Dermatitis gangrenosa*.)

Erythema Multiforme. This, which is a disease related, to a certain degree, with erythema simplex, and yet differing from it, perhaps, chiefly, in the greater amount of exudation, is characterized by the occurrence of reddish, more or less variegated macules, papules and tubercles, occurring discretely or in patches of various size and shape. The name has been given to this form of erythema, on account of the protean character of the lesions, which manifest themselves as erythematous patches of the most varied shapes and sizes, or as papules, vesicopapules and tubercles, scattered or in groups. Various names

are given, denoting the arrangement of the lesions. Thus we have *E. annulare*, occurring in circular patches. Sometimes the circles are very large, or are broken and assume gyrate forms; this is *E. marginatum*.

Erythema papulatum is the commonest variety. It shows itself in the form of isolated or aggregated flat papules of varied size and shape, bright red, bluish or purplish in color, and which soon fade, seldom lasting longer than a week or ten days. *E. tuberculatum* is simply an exaggeration of this form, and all of the varieties mentioned are but forms and stages of the same process, and are often met with, two or more occurring together simultaneously on the same individual. The lesions of *E. multiforme* disappear spontaneously, leaving, perhaps, slight pigmentation and desquamation.

Erythema iris, sometimes called "herpes iris" and (one form) "hydra," is characterized by the appearance of one or more groups of variously-sized vesico-papules or vesicles, arranged in the form of concentric rings, attended, as a rule, by the display of various colors. The patches vary in size from that of a small coin to several inches in diameter, and are made up of a number of, usually rather indistinct, vesico-papules or vesicles, which arrange themselves side by side, so as to form a perfect ring. It is a peculiarity of the disease that new vesicles are constantly forming on the periphery while the centre is healing up. When there are a number of independent patches they sometimes coalesce, and the interlaced arrangement of the concentric and variegated circles present a picture so striking that, once seen, it can never be forgotten. It looks, sometimes, as if the patient had been tattooed in rings of various colors, the prevailing tints being red, yellow and brown. The backs of the hands and feet, as in the other varieties of *E. multiforme*, and the arms and legs are the localities usually attacked, but sometimes the trunk is also involved. The eruption is not usually accompanied by subjective sensations of any kind.

Erythema multiforme is usually found on the backs of the hands and the fingers, forearms and legs. It may show itself

on the face and trunk. Sometimes it attacks the mucous membrane of the mouth, anus, etc., and even the conjunctiva. Now and then it is general, involving the whole surface. A marked feature of the disease is the disproportion between its appearance and the subjective symptoms to which it gives rise. Notwithstanding the angry look which the eruption often assumes, there is very little itching or burning. Sometimes constitutional symptoms, as malaise, headache, rheumatic pains, and gastric derangement, are present in marked cases.

The affection is much commoner in the spring and fall, although it sometimes occurs at other periods of the year. It is among the eruptions of the skin more frequently met with in this country. The American statistics show 915 cases of erythema multiforme among 123,746 cases of skin diseases reported—a proportion of .1739 per cent.

The etiology of erythema multiforme is a complicated one. The following "pathogenetic" classification drawn up by Jacquet will give a fair idea of the relationships of the disease from this point of view:—

A. NERVOUS.....	Peripheral causes.	<ul style="list-style-type: none"> Moral shocks. Violent sensory impressions. Exaggerated vasomotor influence (menstrual period). Special reflex irritation (irritation of the genito-urinary system).
	Central causes.	<ul style="list-style-type: none"> Chorea. Hysteria. Cerebral hemorrhage. Tumors. Locomotor ataxia. Various forms of myelitis.
B. TOXIC.....		<ul style="list-style-type: none"> <i>Drugs.</i>—Quinia, salicylic acid, iodide of potassium, etc. Nephritis, uræmia. Acrodynia, dengue, pellagra. Toxiderma of intestinal origin. Not classified.

C. INFECTIOUS.....	{ Almost all known infections; especially	{ Cholera.
		{ The puerperal state.
		{ Generalized tuberculosis.
		{ Syphilis.
		{ Severe icterus.
		{ Typhoid fever.
		{ Typhus fever.
		{ Angina.
		{ Septicæmia.
	{ Various other infectious diseases.	

The differential diagnosis of erythema multiforme is a matter of some importance, as some of the diseases for which it is liable to be mistaken are widely different in character and demand very different treatment.

Erythema multiforme is liable to be mistaken for urticaria, papular eczema, purpura rheumatica, erythema nodosum, dermatitis herpetiformis, lichen ruber planus and pemphigus.

The following table exhibits the diagnostic differences :—

DIFFERENTIAL DIAGNOSIS

BETWEEN

ERYTHEMA MULTIFORME.	URTICARIA.
1. Lesions multiform in shape and size.	1. Lesions nearly uniform.
2. Unattended with itching and burning.	2. Intense itching and burning.
3. Lesions well pronounced.	3. Lesions less pronounced in character.
4. Eruption passes through several stages.	4. Eruption does not go through different stages.
5. Colors of eruption decided and varied.	5. Eruption persistently white in color.
6. Lasts for a week or more.	6. Usually of short duration.
7. Absence of wheals.	7. Principal lesion a wheal.
8. Skin not especially irritable.	8. Welts immediately produced by irritating the skin.
9. Cause not known.	9. Often the result of digestive disturbance.

ERYTHEMA MULTIFORME.

1. Lesions various.
2. No burning or itching.
3. Papules large size.
4. Papules irregular in shape and form.
5. Eruption usually passes through several stages and colors.
6. Lesions last for a week or more.
7. No patches of exudation.
8. Apt to recur at special seasons of the year.

ERYTHEMA MULTIFORME.

1. Usually not accompanied by joint symptoms.
2. Lesions hyperæmic.
3. Occurs especially on the backs of hands and feet.
4. Color bright red or pinkish.
5. Color fades on pressure.
6. Some burning and itching.
7. Lesions multiple.
8. Markedly inflammatory in character.

ERYTHEMA MULTIFORME.

1. Lesions multiple.
2. Superficial inflammation.
3. Seen usually on forearms, backs of hands and sometimes on body.
4. Appears in several forms or stages.
5. No appearance of tumors.

PAPULAR ECZEMA.

1. Lesions papular.
2. Severe itching.
3. Papules smaller.
4. Papules regular in shape and outline.
5. Lesions remain about the same in form and color, but vesicles may also be present.
6. Lesions last for several weeks.
7. Exudation common.
8. May occur at any time.

PURPURA RHEUMATICA.

1. Rheumatic symptoms well marked.
2. Lesions hemorrhagic almost from the first.
3. Appears especially about the joints.
4. Color purplish or black.
5. Does not disappear on pressure.
6. No burning or itching.
7. Lesions macular.
8. Not inflammatory.

ERYTHEMA NODOSUM.

1. Lesions single or few in number and scattered.
2. Lesions deep seated.
3. Almost always confined to lower extremities.
4. Lesions do not pass through a succession of stages.
5. Lesions appear as tumors or nodes.

ERYTHEMA MULTIFORME.

6. No pain or burning.
7. Color varied, but seldom hemorrhagic.

ERYTHEMA MULTIFORME.

1. Lesions multiform, but principally macular, papular or tubercular.
2. Backs of hands, feet and extremities most affected.
3. Disease seldom lasts over two or three weeks.
4. Subjective sensations rarely marked.
5. Erythematous lesions markedly raised.
6. Lesions pass through several stages of development and changes of color.
7. Lesions usually a peculiar dusky, raspberry-red color.
8. Lesions usually symmetrical.

ERYTHEMA MULTIFORME.

1. Multiple lesions.
2. Lasts for a week or more.
3. Slight itching, if any.
4. Eruption occurs in different forms or stages.
5. Does not follow any particular nerve tract, but is usually observed on backs of hands and feet.
6. Acute inflammation.
7. Leaves slight pigmentation.
8. Runs through a series of shades of red, purple, etc.

ERYTHEMA NODOSUM.

6. Painful and often burning.
7. Ecchymotic appearance of lesions.

DERMATITIS HERPETIFORMIS.

1. Lesions multiform—erythematous, vesicular, bullous or pustular, one or all three.
2. May attack any part of the surface.
3. Disease runs a chronic course.
4. Subjective sensations severe, especially itching.
5. Erythematous lesions, when present, slightly raised.
6. Lesions, though multiple, do not usually change in character.
7. Color of lesions various, but the red is brighter.
8. Lesions usually asymmetrical.

LICHEN RUBER PLANUS.

1. Lesions uniform, squarish in outline, papular.
2. Lasts for months.
3. Severe itching.
4. Lesions remain papular.
5. Lesions follow nerve trunks or lines in the skin.
6. Chronic inflammation.
7. Pigmentation well marked.
8. Lesions ham color or a slightly dusky red.

ERYTHEMA MULTIFORME.

1. Lesions multiform.
2. Bullæ not usual. When they occur, spring from inflamed base.
3. When bullæ form, may result from coalescence of vesicles
4. Lesions several days in developing.
5. Eruption runs through various stages.
6. General health usually good.
7. Lesions often symmetrical.
8. Individual lesions last a week or more.
9. Apt to occur at certain times of the year, as spring and fall.
10. Accompanied by inflammatory symptoms.

PEMPHIGUS.

1. Lesions bullous.
2. Bullæ always present, and spring directly from skin.
3. Lesions bullous from the first.
4. Lesions develop rapidly.
5. Eruption begins and ends with bullæ.
6. Health always impaired.
7. Lesions asymmetrical.
8. Each lesion lasts for three or four days.
9. May occur at any time.
10. Little or no inflammation about lesion.

In the majority of cases no active treatment is called for; light diet, the avoidance of stimulating drinks, mild saline laxatives, with the local application of dilute alcohol, or of carbolic acid, may be employed, as this:—

R. Acidi carbolici, f ʒ iij
 Glycerinæ, f ʒ j
 Aquæ, ad Oj. M.

Dusting powders, as that of camphor, oxide of zinc, and starch, given under erythema intertrigo, also prove useful at times. Internally, iodide of potassium in doses of half a drachm daily has been highly recommended. I have tried it repeatedly, however, without any effect.

Erythema Nodosum. This affection is characterized by the formation of rounded or ovalish, variously-sized, more or less elevated, reddish nodes. The disease is apt to be ushered in by some general disturbance of the system; the nodes often appear suddenly; they may come on any part of the body, but are commonly found on the legs and arms. They vary in size from a

small nut to an egg, are reddish in color, tending to become bluish or purplish. As they disappear, they undergo various changes of color, like a bruise, and it is often difficult to distinguish the lesions from ordinary contusions, especially when they occur over the shins. When the disease is at its height, the lesions have a tense, shining look, as if they contained fluid, and often an indistinct sense of fluctuation is perceptible. They never suppurate, however. Not unfrequently they are more or less hemorrhagic in character. They vary in number from a few to a dozen or more. They come out, as a rule, in crops. They are painful or tender on pressure, and are usually attended by burning sensations. Sometimes the lymphatic vessels are involved. The affection usually terminates in recovery in two to four weeks. An "ominous" form has been described by authors, which is said to be the precursor of tuberculosis. I myself saw one case, in which a little boy, after suffering for three or four weeks with erythema nodosum, fell into a delirious condition and died, with the symptoms of tubercular meningitis.

Erythema nodosum is a rare disease. The American statistics show that it occurs only eighty-two times in 123,746 cases of skin disease, .066 per cent.

No active treatment is called for. Rest in the recumbent posture, the correction of any functional derangement; quinine, if required, is all that will usually be needed. If there is a family history of tuberculosis, it will be better to give cod-liver oil from the beginning.

Erythema, Desquamative Scarlatiniform. A peculiar scaly eruption of the skin, resembling the toxic erythemata on the one hand and pityriasis rubra and scarlatina on the other. The disease is ushered in by malaise, lassitude, rigors, which may be severe or slight and may last for several days. Next, a febrile movement sets in, reaching, probably, its highest point in the first two or three days, and sometimes attaining a high temperature. Pains in the back and limbs, headache, sometimes severe, occasional anxiety and insomnia with epistaxis are the chief symptoms. Nausea and retching are rare, as is anorexia.

There is no diarrhoea; the perspiration may be excessive, but in most cases is entirely suppressed.

The eruption may come out early, or not until several days after these symptoms set in. The lesions are usually very small at first, but soon coalesce and form scarlet patches, sometimes very extensive and usually accompanied by considerable burning, pricking, smarting and itching. These symptoms, sometimes very distressing, do not last long, and often disappear before the eruption has completed its evolution.

The cutaneous manifestations may take their rise at various points, beginning at the upper portion of the body and traveling down to the feet, or *vice versa*. In one case it may first appear on the upper and inner aspect of the thighs, in another it first invades the wrists, extending in succession to the arms, the forearms, the axillæ, the legs and the body; it may attack several localities simultaneously.

In any case the eruption tends to spread rapidly, sometimes invading the whole body within twenty-four hours, though in very rare instances several days may be required. The head and extremities are usually the last points attacked; the head may escape.

When completely developed, the eruption is characterized by an intense and uniform redness, which, however, shows darker shades in places, as the back of the neck and the abdomen. Occasionally œdema is observed; in one case an hemorrhagic appearance was assumed.

When the redness has lasted over the whole surface three or four days (in rare cases longer), desquamation sets in, beginning as a small superficial fissuring of the epidermis; the cracks widen and extend, the epidermis between them rises and loosens, turns to a pearly-white and gradually becomes detached in flakes. This desquamation is distinguished by its dryness and abundance, the scales being swept from the patient's bed in handfuls every morning. The individual scales are then dry and transparent; they may be quite large, an inch or more in diameter. There is no moisture at any time.

Sometimes the mucous membranes share in the disease process, and an erythematous angina of slight severity is observed. In most cases the tongue is white at first and then it seems to desquamate, becoming smooth, glazed, raw looking and of a bright red color. The nails and hair are frequently shed.

Patients complain of dryness of the skin, the insensible perspiration seems suppressed, chilliness is experienced in undressing. Thirst is marked; the kidneys seem normal. Bronchial and cardiac complications are unknown.

The patient's appetite and strength are restored in most cases, even before the termination of the eruptive stage, and patients often remark that, were it not for the redness and desquamation, they would feel as well as usual.

One of the most striking features of this affection is its tendency to relapse. The first attack is usually the most severe, lasting as long as a month or six weeks. Then after an interval of a few months to several years there may be a second one not so severe. Successive relapses may then occur, following one another with increasing frequency and decreasing severity until they may even merge into one another. Tilbury Fox had a case which presented at least one hundred relapses.

The diagnosis of relapsing desquamative scarlatiniform erythema is at times by no means easy, and it is made more difficult by the fact that the affection itself varies so greatly in its symptoms in different cases, and seems to merge on one side or another into some similar affections, as eczema or psoriasis, with which, however, in its typical form it has little in common.

The affections with which it may be confounded are, erysipelas, eczema erythematosum, pityriasis rubra, the toxic erythemata and scarlatina. For the distinguishing characteristics of the former, see under their respective heads. The diagnosis from scarlatina is, however, of great importance and sometimes of no little difficulty. The following table will give some aid in distinguishing the two diseases :—

SCARLATINIFORM ERYTHEMA.

1. Non-contagious.
2. Onset less abrupt.
3. Febrile reaction less marked and diminishes rapidly in degree.
4. Angina absent or comparatively slight.
5. Redness of skin pronounced, desquamation profuse, and eruption lasts longer with relapses.
6. General constitutional symptoms slight.
7. No serious complications.

SCARLATINA.

1. Highly contagious.
2. Onset sudden.
3. Febrile reaction very marked and continuous.
4. Angina marked.
5. Eruption less marked. Runs a short uniform course.
6. Severe constitutional disturbance.
7. Albuminuria, buboes, endocarditis, etc., accompany the disease.

The treatment of this form of erythema must be on general principles. Diuretics and tonics are usually indicated, with soothing, oleaginous applications externally.

Erythrasma. An affection of the skin characterized by pin-head to palm-sized erythematous, rosette-shaped or irregular macules, of a reddish yellow, yellowish or brownish color, covered with a slight coating of fine floury scales most marked at the periphery of the lesion, which is sharply defined. Vesicles and pustules do not occur.

The disease is said to affect chiefly those parts of the body where exposed surfaces of the skin are in contact, as in the axillæ, groins, cleft of the anus and those parts where the scrotum touches the thigh. The eruption spreads very slowly and in serpiginous outline. It may last for months and years without apparent change.

Erythrasma is the result of the growth of a very minute vegetable fungus, much smaller than those of the tinea in the superficial layers of the epidermis.

The diagnosis of the affection is to be made in distinction from *tinea versicolor*, *chloasma* and *pityriasis rosea* (q. v.).

I have never seen a case of the disease. It must be extremely

rare in this country. The treatment would naturally be that of the tinea (see *Tinea versicolor*).

Excoriations, Neurotic. (See *Neurotic Excoriations*.)

Exfoliative Dermatitis. (See *Dermatitis exfoliativa*.)

Farcy. (See *Glanders*.)

Favus. (See *Tinea favosa*.)

Feigned Diseases of the Skin. Eruptions, self-produced, with or without the intention to deceive, are probably of more frequent occurrence than would be supposed, from the rarity with which such cases are found reported in medical journals. Such cases are commonly found among hysterical women, or among soldiers, sailors and prisoners, who are apt to be malingerers.

Laugier (*Dict. de Méd. et de Chir. Pratiques*, article "Maladies Simulées") gives a classified description of the various affections of the skin commonly simulated. *Sycosis* has been imitated with greater or less success by means of applications of tartar emetic ointment, which produces umbilicated pustules followed by thick crusts. Oil of cade produces a similar eruption. Sequestration of the patients beyond the reach of irritating substances is followed by a rapid cure. Even close observation of individual lesions for a few days will show the presence of the artificial eruptions, as the lesions run a rapid course, while those of *sycosis* are much more persistent.

Favus is imitated by dropping nitric acid on circumscribed areas of the scalp, protecting the neighboring parts by a circle of grease or ointment. This produces lesions resembling the yellow cups of *favus*, but to be distinguished certainly by microscopic examination, which, in the case of *favus*, infallibly shows the presence of fungus. *Favus* is such a rare disease in this country that it is not likely to be simulated often. As its presence permitted the French conscript to avoid service in the army, simulation of *favus* was formerly not uncommon in that country.

Alopecia areata may be simulated by plucking the hairs over a circumscribed area, but a close examination will show traces of this rather violent operation, and surveillance even for a few

days will permit the growth of new hairs to be perceived by the eye before they grow long enough to allow of a fresh epilation.

Tinea tonsurans is simulated by the partial destruction of the hair by means of depilatories. These, however, give rise to an irritation of the skin quite different from the peculiar ash-colored, goose-flesh-like surface to be seen in *tinea tonsurans*. Microscopic examination of the short hairs will, as in the case of supposed favus, show the character of the disease.

Scabies may be simulated by careful tearing up of small portions of skin by the aid of a fine needle. The absence of the peculiar and characteristic burrow of the itch insect, and the impossibility of demonstrating the presence of the acarus, make it an easy matter to detect a fraud of this sort.

Bromidrosis.—Among the means resorted to in France to avoid conscription, the production of fetid odors appearing to proceed from the sweat-glands finds a place. Although this mode of malingering has not gained a place in this country, it is worth mention—the inunction of the axillæ with Dippel's animal oil, grease mal-odorized by asafoetida, decayed fish or cheese. Frauds of this sort are easily detected if the suspected person can be cleansed thoroughly and placed under surveillance for a short time. Carbonate of sodium and permanganate of potassium can be used for disinfection. An additional mode of detection is the examination of the soles, which, in true bromidrosis, present a macerated appearance. After thorough cleansing, if the supposed malingerer is caused to sweat violently, the perspiration freshly secreted will show whether or not true bromidrosis is present.

Hæmatidrosis is, in fact, a hæmorrhage which occurs over a smaller or greater area of unbroken skin. In many cases it is to be considered as one of the nervous symptoms of hysteria in the young, particularly in young females, and though sometimes genuine, is not infrequently simulated. Careful surveillance, with examination to make sure that the blood of some animal be not substituted, or some minute punctures practiced, will alone

* to make the diagnosis plain. (See *Hæmatidrosis*.)

Chromidrosis has frequently been simulated, and, in fact, the existence of some forms of genuine chromidrosis was denied for a considerable time. Black chromidrosis, in particular, was held in great suspicion. But the careful investigations of several experts, particularly in France, have placed the existence of the disease beyond question. Plumbago, soot, indigo, pure or mixed with talc, have been employed to imitate the peculiar blue-black of some varieties of chromidrosis. To discover a fraud, the part should be carefully washed, examined with a lens, and kept under careful observation, or covered and sealed. Microscopic examination of the substance appearing on the surface will sometimes throw light on the materials composing it, and thus lead to a discovery of the genuineness or falsity of the supposed chromidrosis. Black chromidrosis is the only form which has been simulated. For the description of this, as well as the other forms of chromidrosis, reference may be made to the article on that subject.

Vesicular and Pustular Eruptions (dermatitis, eczema, etc.).

1. *Imitated Eruptions*.—Croton oil and other irritants are used by malingering soldiers and others to produce pustular eruptions, and sulphur, turpentine, pitch plasters, mercurial ointment, are also employed for the same purpose. All these substances give rise to confluent vesicles becoming rapidly purulent, or to vesico-pustules covered with a thick crust.

Mechanical irritation may be employed, with the result of giving rise to eruptions resembling dermatitis. Sangster described the case of a young girl, first as "abortive herpes," and later as "neurotic excoriation," where painful erythematous patches were succeeded by exudation on the surface of serum and sero-pus, each patch terminating in desquamation, and running its course in ten to fourteen days. There was no vesiculation or loss of substance. The longest interval during which the patient had been free from the lesions was three months. The case came under observation at intervals for three years, but finally Sangster was able to satisfy himself that the lesions were produced purposely by forcibly tearing with the nails.

Steinberg has described the case of a girl of nineteen, pale, nervous, and suffering from hysterical aphonia, who applied for relief for an eruption which had persisted almost uninterruptedly for three months, and which consisted in groups of two or more parallel, elongated, crusted lesions, situated on the flexor and extensor surfaces of the forearms and on the tibial surfaces of the legs, with eczematous patches in the flexure of one elbow and on one instep. The crusts resembled those of impetigo contagiosa. The patient, who had been for some time unsuccessfully treated, was soon suspected of simulation, and finally confessed having produced the lesions by constant rubbing with the finger ends. The sensation thus given was an agreeable one, and it was this, she asserted, and not the desire to gain sympathy, which was her object.

Fortner has described the case of an unmarried woman 25 years of age, who applied for the relief of a supposed loss of power in the thumb, probably hysterical. Shortly after coming under observation, certain peculiar lesions showed themselves on the back of the right hand and wrist, consisting of four oval abrasions, three-quarters of an inch in length by one-quarter broad, and presenting the appearance of a blister from which the cuticle had been removed, leaving a raw surface bathed in serum. Zinc oxide ointment was applied and the limb securely strapped and bandaged, when the sores quickly healed. New ones appearing a little later, Fortner, suspecting the artificial character of the lesions, took occasion to rub a stick of lunar caustic over each abrasion until considerable pain resulted. This acted as a deterrent, and no more sores appeared. Seven months later, however, the patient returned with the same lesions. She belonged to a markedly neurotic family, and Dr. Fortner very properly reached the conclusion that the lesions had been artificially produced, probably to create sympathy.

A similar case has been reported by Murrell. A young girl of 14 showed certain lesions which had appeared on and off for a year previously, breaking out immediately after the occurrence of nervous phenomena called "fits." According to the history

given, the arms and legs alone had been affected, the eruption coming on in the night, and the lesions presenting, when examined, the appearance of blisters or burns, and taking a long time to heal. Subsequently "bladdery heads" formed, full of water, and these burst, leaving sores. On examination, several elongated patches like recently-healed blisters, one and a half inches long by one-half inch broad, could be seen on the arms and legs and under the mammary region. Although when taxed by the examining physician the patient persistently denied having produced the lesions upon herself, yet there seemed no doubt that the lesions were artificial and self-made.

I have observed several similar cases occurring in young women, where, however, no clew could be gained as to the cause of the eruption. In one case erythematous patches of irregular shape, soon yielding to slight exudation and crusting, or occasionally to denudation of the skin, occurred on the face, backs of the hands, forearms, and occasionally the legs. The eruption usually occurred about the menstrual period. The eruption seemed to be a dermatitis. It was accompanied at first by a burning sensation, but gave no trouble afterward. The eruption seemed to be a source of great shame and annoyance to the patient. Although it was suspected of being factitious, no proof of this could be obtained.

Under the name "so-called erythema gangrenosum," Dr. T. C. Fox has described two cases, in one of which large rounded or oval patches of gangrenous inflammation of the skin of the neck and arms appeared successively or at intervals for several years, leaving in some cases faint scars, in an hysterical woman of forty-five; while in the other case, a girl of seventeen, there existed erythematous areas of a severe type, like scalds, running into vesiculation and drying up without scars. The localities affected in the latter case were the mammæ, forearms, thighs and legs.

2. *Sustained or Aggravated, Vesicular or Pustular Eruptions.*
The diagnosis in these cases must be made, not as to the nature of the eruption, originally a spontaneous one, but as to the cause

of its persistence. Such cases not infrequently occur in large hospitals, when the soothing applications made during the day by the physician are replaced at night by irritants. Hermetic occlusion of the affected spot or localities, with surveillance, will unmask the fraud.

Pemphigoid Eruptions. Bazin has reported a case in which a young girl succeeded in producing an eruption of bullæ by introducing cantharides powder under the epidermis. A case was reported by the late Dr. Fagge, of London, in which a young girl caused an eruption of bullæ resembling those of pemphigus, by the application of nitric acid to the skin. A careful study of the course pursued by the eruption, together with an examination of the buccal and pharyngeal mucous membranes, and a consideration of the patient's general health, will throw light on the character of the eruption.

Rupia (ulcero-crustaceous syphiloderm?) is said to have been imitated by the ingenuity of French malingerers, but as this eruption is usually accompanied by profound cachexia and other signs of malignant syphilis, it is not difficult to distinguish the true from the false eruption.

Papular eruptions, particularly *urticaria*, are occasionally simulated by the application of nettles, etc., or by the ingestion of substances known to produce the eruption. As these eruptions are transitory, the subjects of them must usually be hysterical persons, as malingerers would hardly be likely to take the trouble for nothing. The absence of concomitant general symptoms must be relied upon to establish a diagnosis, in connection with the precautions mentioned above, *e. g.*, surveillance, etc.

Ulcers. The fictitious production of ulcers has been a practice of malingerers and deceivers of all ages. Various animal, vegetable and mineral substances have been employed to cause such a destruction of tissue as shall simulate a true ulcer. Oil of crocus and cantharides, the clematis vitalba or common virgin's bower (a former remedy for scabies), the ranunculus sceleratus, a species of crowfoot, the anemone pulsatilla, the euphorbia

lathyrus, bryony root, savin, nitric acid, potassa caustica, and frequently caustic lime. This list is inserted to aid the diagnosis in doubtful cases, but commonly there are certain features of the factitious ulcer which will serve to distinguish it from other affections with which it is liable to be confounded. Thus the appearance of the sore and its surrounding parts, the condition of the patient, and the probability or not of any advantage to be gained by simulation. In the lower limbs the presence or absence of varices, dermatitis, eczema, previous gummatous swellings, etc., should all be taken into account. See also the description, in other parts of this work, of diseases apt to give rise to ulceration, *e. g.*, cancer, epithelioma, scorbutus, scrofula, syphiloderma, ulcers, dermatitis medicamentosa, etc. In the case of genuine ulcers kept up by stimulant or irritating substances, hermetically sealing the part and surveillance are required to demonstrate fraud.

Erysipelas is occasionally simulated by the application of irritants. Thapsia is employed for this purpose in Europe. The artificial dermatitis thus produced does not, except to the most superficial view, resemble erysipelas; there is little or no fever, no general symptoms of any kind, in fact, and the affected surface commonly shows minute phlyctenulæ or numerous minute vesicles.

Phlegmon or *abscess* is occasionally produced by excessive stimulation of the surface, or by the introduction of foreign objects under the skin. The malingerer or simulator must, in these cases, not only possess unusual fortitude to induce painful lesions of this sort, but must also be sufficiently alive to the pathological necessities of the case to put his sticks and thorns, or what not, in places where such objects would be apt to become imbedded. Such simulations are not always without danger. Hutchinson gives a case in which amputation had to be performed as a result.

Feigned diseases of the skin are often very difficult of diagnosis. On the one hand, care must be taken not to mistake professional eruptions, as bakers', bricklayers', sugar-boilers',

bartenders' dermatitis, or the eruptions produced by the ingestion of drugs (see *Dermatitis medicamentosa*) or of certain edibles, for factitious eruptions; and, on the other hand, it must be remembered that various skin diseases may be closely simulated by artificial means, and that such deception may be kept up for months. In the case of soldiers and prisoners, where fraud may be suspected, such measures as bandaging, surveillance, etc., may be practiced; but among hysterical females of the better classes the difficulties of diagnosis are heightened by the fact that factitious eruptions may be caused by a sort of automatic mental impulse, and without any perceptible object.

Two points must be remembered in such cases. First, the disease is almost always anomalous in the time, place, or manner, of its appearance, and in the course it runs. Second, it almost always shows some sign of having been artificially produced, and is almost invariably in a position easily and conveniently accessible to manipulation. Thus the face, forearms, chest, and mammary region, and after these the lower limbs, are most apt to be the seat of the eruption. If, in addition, any motive for malingering, or for exciting interest and sympathy, can suggest itself, the case should be carefully looked into from this point of view. The lesions and their neighborhood should be examined, with a view to detecting any trace of the use of mechanical irritants, or of such domestic articles as are apt to be used; mustard, vinegar, cantharides, nitric acid, etc., have all been employed. The examination should always be so made as to avoid suspicion of its object, and if the physician comes to a positive conclusion that the eruption, in any given case, has been artificially produced, let him not think of proclaiming his conclusion, which will probably only lead to the suspicion, on the part of friends and relatives, that he does not know his business. Better to treat such cases with placebos, and have them recover spontaneously, without forcing the patient to admit a deception, or pitting one's reputation for sagacity against the patient's veracity. Of course, I have chiefly in mind the case of women feigning skin diseases.

Fibroma Molluscum, also called *molluscum fibrosum*, is a chronic hypertrophic affection of the skin, characterized according to the variety of the affection by a single or a few pendulous tumors, or by numerous sessile or pendulous growths of the cutaneous connective tissue. Though it is possible that these two varieties may run into each other, the generalized variety very often showing one or several tumors of large size, and the circumscribed tumor being occasionally accompanied by a number of small lesions, yet it will be convenient to consider them separately.

The generalized form of the disease is characterized by the presence of cutaneous tumors, from a dozen or more to thousands in number, sessile or prominent, roundish in outline, soft, indolent, and generally of small size, though occasional exceptions occur. The lesions are found on all parts of the surface, even upon the palms or soles, but are usually most numerous upon the head and trunk, where they are sometimes so closely set as to be confluent. They occur somewhat less frequently upon the limbs, diminishing as the extremities are approached. The skin covering the genitals is occasionally, though rarely, affected. In some cases, where a post-mortem examination has been made, some of the internal organs have been found to display these tumors, and in several cases they have been observed in numbers upon the nerves.

The lesions vary in size from that of a pin-head to a hazel nut, and are found occasionally as large as a hen's egg, but rarely larger. The smaller ones may be felt in the skin but rarely rise above the surface, while the larger ones are more prominent and tend to become pedunculated and pendulous. The seat of the lesions is in the derma, and they move with it. Their color is that of the normal skin or slightly pinkish; occasionally they are covered with a fine vascular network, giving a violaceous tint. On some lesions, especially those upon the back, the orifice of a dilated sebaceous duct can be seen, from which a plug of sebum (comedo) may be squeezed. The sebaceous glands, however, are in no way essentially connected with the growth; nor

are the hairs, but the latter occasionally fall out, probably from pressure.

The tumors are of various consistency, but they are always more or less soft and flaccid, excepting in the case of the larger ones, which are occasionally distended and firm, with a smooth, glistening surface as if the tumor were oedematous. Alongside of such tumors may be seen others which have a flaccid, empty feeling, like a scrotum without its testicles or a raisin deprived of its seeds. A curious point is that, although the tumor can be rolled between the fingers, firm pressure reveals a firmer central core of tissue vaguely defined to the touch.

Generalized fibroma molluscum is an indolent disease, and patients rarely come under the notice of the physician excepting for some intercurrent disease. While the tumors usually seem perfectly stationary, yet now and then a case is observed in which one or several of the lesions seem to increase in size and may become enormous. The period at which this change takes place varies in different cases. It may occur at puberty, or in the female during gestation if the tumor be seated upon the labia. The growth thus distinguished becomes pendulous, while preserving its rounded form, or takes the form of a dewlap, approaching to the kindred formation known as *dermatolysis*, *pachydermatocoele*, *cutis pendula*, etc. (See *Dermatolysis*.)

Circumscribed fibroma molluscum commonly occurs in the form of one, two or rarely three tumors (which in the latter case are situated alongside of one another) of variable, but always considerable size, which is the greater according to the size of the tumor. The size in some cases reported has been enormous. In one case an enormous fold of skin sprang from the ear, which was greatly elongated, and from the back of the head, covering the neck, chest and abdomen, fell in voluminous folds like a mass of intestine. The patient when seated was obliged to carry the mass in her lap.

The localities from which these single tumors sprang are the temple, the upper eyelid, the nucha, behind the ear and at the level of the last cervical vertebra, the chest below the breast to

PLATE VI.



FIBROMA MOLLUSCUM—Disseminated Form. (After Rocklinghausen.)
(See page 227.)

the hip, and, chiefly, the labia majora. In one case the growth sprang from the sole of the foot. The skin covering these lesions is normal or slightly pigmented, smooth, or rough and rugous. In consistence they are like a mammary gland to the touch.

Circumscribed fibroma molluscum is indolent and only calls for relief when the tumor is so large as to inconvenience the patient, when an operation may be required. Degenerative changes of an inflammatory or malignant character sometimes occur in the tumors of fibroma molluscum, particularly of the circumscribed variety.

The etiology of fibroma molluscum is obscure. Hebra has asserted that the disease occurs in persons of stunted mental and physical growth, and this is the experience of many writers, which has also been mine in the few cases I have observed. It is commoner among women than among men. Fibroma molluscum is a rare disease; only 86 cases were reported in the 112,775 cases of the American statistics.

It is a curious fact, and one worthy of note, that in all cases of fibroma molluscum which have been examined *post-mortem*, new growths similar to those on the skin have been found upon the main trunks of the nerves. It has been suggested that fibromata of the skin are originally neuro-fibromata, the nerves being at first present and then disappearing as the tumor grows and the connective tissue becomes prominent.*

The diagnosis of fibroma molluscum rarely presents any difficulty. The number and distribution of the lesions, the unchanged character of the skin covering the tumors, the variety in size and shape of the latter, and the pendulous character of the larger tumors, are all highly characteristic. From molluscum epitheliale the tumors are to be distinguished, by not having any depression or aperture upon their summits. In rare cases where this exists a comedo can be squeezed out of the opening. They

* The plate shows a case of multiple fibromata, in which fibrous tumors of the nerves (neuromata) were found after death.

are moreover situated in the skin, which is normal over them, whereas the lesions of *M. epitheliale* are nearer the surface of the skin, which is tightly stretched over them. The tumors of fibroma molluscum are distinguished from those of lipoma, by the fact that the latter are soft and lobulated in structure. The diagnosis between fibroma molluscum and other hypertrophic growths of the skin is rendered difficult because our ideas regarding the line to be drawn between fibroma and such affections as dermatolysis, pachydermatocele, elephantiasis, are indistinct.

The prognosis of fibroma molluscum is favorable excepting for the possibility of malignant degeneration, which must be considered.

The treatment is limited to the removal of unsightly or discomforting tumors by the knife or the galvano-cautery loop.

Filaria Medinensis, sometimes called *Dracunculus* or *Guinea-worm disease*. An affection chiefly of tropical countries, caused by a parasitic worm. It is particularly common along the west coast of Africa, in Senegal and Guinea, and in Egypt, Persia and India. It has also been met with in the West Indies. Cases have likewise been reported as occurring in this country, but always in persons who have lived in tropical climates, with the exception of two cases occurring in the South and a third which I recently reported to the American Dermatological Association. The latter occurred in a Custom House employé of Philadelphia, who was born and had always lived in this city, but who handled invoices sent from the Orange Free State in Africa, one of the localities where this disease is endemic.

The appearance presented is sometimes that of a cord under the skin, often of a dusky red color, sinuous and slightly raised above the general level of the skin. At other times, especially when the pregnant worm is very much swollen and about to bring forth its ova, the lesion of the skin resembles a boil. Sometimes the parasite is single, at other times a great number, even hundreds, may exist under the skin, in the intermuscular areolar tissue and even in the parenchyma of some of the internal organs. The full-grown worm is from $\frac{1}{2}$ to $\frac{1}{12}$ inch in thick-

ness, and vareis from several inches to three feet in length, according to its age. The young worm, when of microscopic size, finds its way by boring into the skin and deeper tissues, and there takes up its habitat, growing gradually, for months, without attracting attention, until it attains a sufficient size to excite irritation and inflammation. The disease is usually contracted in low, swampy places, by persons who go barefoot, and usually attacks the feet and lower extremities, though the exact mode of entrance is unknown. The treatment commonly employed in the countries where the disease is endemic consists in extracting the worm, inch by inch, and day by day, as soon as it makes its appearance on the surface, being careful not to break the creature during the operation. Galvanism has also been applied with success, one pole of a battery being placed on the head of the worm, and the other held by the patient.

Among medicines iodide of potassium in moderate doses has been employed successfully, but the best treatment is that of Horton, by means of asafœtida. The late Tilbury Fox used this treatment with success, and in the case I have cited, the administration of pills of asafœtida, to the amount of forty-eight grains daily, caused the disappearance of the parasite (probably by death and absorption) within five days, after other modes of treatment had been employed without result for several months.

Filaria Sanguinis Hominis. The microscopic embryo of a nematode worm, the *filaria Bancroftii*, found in the blood of many human beings in some hot countries. The female alone is known, as a thread-like worm 2 or 3 inches in length and $\frac{1}{80}$ inch in diameter. The embryos, as found in the blood, are $\frac{1}{75}$ by $\frac{1}{3500}$ inch. The eggs are $\frac{1}{1000}$ by $\frac{1}{1650}$ inch. They occur in most patients suffering from chyluria, lymph scrotum and many cases of elephantiasis. Manson says that the parent worm, being located in some lymph channel of a patient, instead of throwing off the filariæ alive and with a diameter of $\frac{1}{3500}$ inch, aborts and throws off eggs before the embryo is fully developed; but the eggs have a much greater diameter than the filariæ, and they plug lymph vessels through which the latter would pass.

The current being arrested, the vessel becomes distended behind the point of occlusion, and the result is lymph scrotum, chyluria, etc.

Certain mosquitoes, in drawing blood, take with it into their stomachs some of the filariæ, where the latter undergo changes and are deposited with the mosquitoes' eggs and fæces in water, where they may make further progress, and finally be drunk by a human being, and in this second host attain full development. (See *Elephantiasis*.)

Fish-skin Disease. (See *Ichthyosis*.)

Fissures in the skin are generally due to eczema. (See *Eczema*.) They usually occur in places where the skin is rendered unusually brittle by inflammation, and at the same time is subject to flexure. The ends (pulp) of the fingers and flexures of the fingers and toes are common seats of fissures. Also the muco-cutaneous juncture of the mouth and anus, and the posterior part of the ear where it joins the scalp. The treatment of fissures is usually at first stimulant, and then protective. Chaps and fissures about the lips and anus should be slightly torn open, and then touched with a point of solid nitrate of silver or a sharpened splinter of wood smeared with a strong red oxide of mercury ointment, 40 to 60 grains to the drachm. Ointments containing tar are also useful, as described under eczema of the anus. Fissures behind the ears may be treated in the same manner, with a slightly milder degree of stimulation. Fissures occurring in the ends of the fingers may be treated by soaking in hot water, to soften the thick epidermis, and then rubbing in a ten per cent. solution of oleate of mercury, or, if painful, of equal parts of the ten per cent. oleate of mercury and oleate of morphia. If the cracks are deep, they may be touched with the solid nitrate of silver stick, after preliminary soaking in hot water, and may then be painted with a solution of gutta percha for protection. Or the soaked finger ends may be rubbed with a 5-15 grain solution of caustic potassa, and then kept constantly wrapped in unguentum diachyli. I mention these various remedies, because what will suit one case will do no good in another. Each must

be tried in turn; much perseverance must be exercised, and, at best, a very guarded prognosis must be given in fissures of the finger ends. In some cases they seem, like dryness and brittleness of the hair and splitting of the nails, to be rather the expression of a constitutional peculiarity than a disease.

Framboesia, called also *yaws*, *pian*, and *endemic verrugas*, is a contagious endemic skin disease, characterized by general and cutaneous symptoms, occurring in the West Indies and other tropical countries. The eruption consists of variously-sized papules, tubercles and tumors, of a reddish or yellowish color. The lesion appears as a yellowish or whitish point or spot, which gradually enlarges and projects from the surface, looking, when fully developed, like a piece of cotton wick, a quarter of an inch or less in diameter, dipped into a dirty yellow fluid, and stuck on to the skin, in a dirty, crusted, brownish setting, and projecting to a greater or less extent. Or at times the lesions look like red currants, with flat tops, of a bright pink color, glassy, semi-transparent. Larger lesions look like cherries. The tubercles may be smooth, scaly or ulcerated. The eruption generally manifests itself on the face, upper or lower extremities and genitalia. The largest growths occur on the lips, eyelids, toes and genital organs. The lesions are not painful or itchy. The disease is probably not hereditary. Most observers consider it contagious. It bears no relation to syphilis. The treatment which is effective consists of hygiene, good food and tonics, with cleanliness and the use of carbolic acid solution, or a weak nitrate of mercury ointment locally.

Freckle. (See *Lentigo*.)

Fungous Foot of India, called also *Madura foot*, *Podelcoma*, *Mycetoma*, etc., is a peculiar endemic disease of the skin and deeper tissues which prevails to a considerable extent in India, and of which cases have been reported as occurring in Mexico and in the United States. It appears to be unknown in Europe.

The disease is characterized by a tumor-like swelling occurring usually in one foot, more rarely in the hand or arm, and in one case in the shoulder, together with the formation of blebs

or tubercles upon the surface, which become the point of exit of sinuses penetrating to the deeper tissues and giving exit to whitish granules or black roe-like masses, mingled with a sanious discharge.

It may attack individual segments of either hand or foot, as the toe or the finger. In fact, the palmar surface of the finger or thumb, and the plantar surface of the toe, or the interspace between the toes, are often the first localities to be attacked.

The earliest signs of the disease are variously described as discoloration or induration of the skin in places, or as swellings, tubercles, knots, and lumps of various sizes; which are sometimes compared to boils, but are usually larger, non-sensitive, and either movable or apparently limited to the integument, or deep-seated and fixed. They are firm, indolent, and very slow in progress. Sometimes the swelling, even when superficial, is by no means prominent or defined, and when deep-seated it may be more perceptible to touch than to sight. Sooner or later vesicles or pustules appear, or more limited elevated points, and the former burst or the latter ulcerate; then there occurs a thin and scanty discharge in which the supposed fungous particles are at once to be found, and a fistulous opening remains, whence the latter continue to issue.

The origin of the disease is commonly attributed to the entrance of a thorn or splinter, or to a bruise inflicted upon the part. Investigation, however, has failed to demonstrate the origin of the affection, as from without it seems on examination to have invariably first shown itself at some little distance under the skin. The inoculation of the foot, however, does not in any case seem to have a strictly defined local mark. The first sign of the disease is revealed by its consequences, that is to say, commonly by a tumor which sooner or later communicates with the exterior, and then for the first time the so-called fungous particles or roe-like bodies appear.

The course of the disease is essentially chronic, the history of a case covering years rather than months, but occasionally, within even one year after its first outward sign, the growth may spread

over a great part of the foot. It appears to spread by the prolongation of sinuses in the direction of least resistance (though no tissue, not even bone, can resist the onset of the disease). At various points in these sinuses certain globular foci, containing peculiar gelatinous and granular constituents, form, and these sinuses and nodes multiply until the foot seems to be one mass riddled with holes.

The disease is always protracted in duration ; four, six, or even twenty or more years may elapse before the foot becomes so entirely disorganized as to demand amputation. The affected foot may, in some protracted cases, exceed its fellow four or five times in bulk, and attain a weight of a dozen pounds or more.

Although the possibility of a spontaneous cure cannot be denied, yet no case of such a termination is on record. The tendency of the disease is to increase progressively. Unless it is destroyed by caustics or other destructive agents, or cut off by amputation, it tends to spread until the patient dies of exhaustion, or from some complication, as diarrhœa, dysentery, or anasarca. Irritation, as shown by inflammation of the lymphatics, or enlargement of the inguinal glands, has not been observed, nor has anything like septic infection of the system been recorded.

Fungous foot may be confounded with Guinea-worm disease, elephantiasis, caries, struma, enchondroma, malignant tumors, tubercular leprosy, or with a conjunction of such diseases.

The treatment of fungous foot should include cleanliness and protection as prophylactic measures, with removal of the growth by scraping and cauterizing when localized, or by amputation when this is required. As there is no necessary limit to this disease the stump should always be carefully examined after an amputation to see that the affection has not penetrated to a point beyond that indicated by external appearances.

Furuncle, commonly known as boil, is a deep-seated, inflammatory disease, characterized by one or more variously-sized, circumscribed, more or less acuminate, firm, painful formations, usually terminating in central suppuration. Boils

may occur singly, or oftener in numbers. When they occur in successive crops the condition is known as furunculosis. The lesion, at first a small, ill-defined, reddish spot, situated in the true skin, and tender and painful from the first, soon becomes larger, slightly elevated, and shows a tendency to suppurate about its centre. It arrives at maturity in a week or ten days, and is then a slightly-raised, rounded or pointed formation, with a suppurating centre, called the *core*. At times no centre of suppuration forms; it is then called a "blind boil." The size of a boil may vary from that of a split pea to a large coin. Its color is dusky red; it usually gives rise to a dull, throbbing pain, increasing in intensity until suppuration takes place, and then subsiding.

Though the boil may attack any part of the body, its favorite seats are the face, ears, neck, back, axillæ, buttocks, perineum, scrotum, labia and legs. Sometimes it is accompanied by some general constitutional disturbance. Neighboring glands may be sympathetically enlarged.

Boils sometimes occur as complications or sequelæ of other diseases, *e. g.*, eczema. An acute attack of eczema often winds up with a crop of boils. Sometimes the boil tends to return again and again in about the same spot.

The causes giving rise to boils are various and sometimes obscure. Often they are the result of a low and depraved condition of the system. General debility, overwork of a mental sort, excessive bodily fatigue, nervous depression, improper food and irregularity of the functions of the body are among the common causes of boils. They are sometimes encountered, however, in persons apparently enjoying perfect health, and given to active and varied out-door exercise and amusement. The boils to which the hydropathist points with pride, as evidence that the peccant humors are being "driven out," are in reality the evil result of erroneous hygiene and regimen. Boils not unfrequently occur in the course of other diseases, as diabetes, chlorosis, fevers, uræmia and septic pyæmia. Occasionally certain atmospheric conditions, prevailing chiefly in the spring and autumn, seem

influential in determining the occurrence of boils, which at times appear to prevail as a sort of epidemic.

The diagnosis of furuncle is generally easy, the affection being familiar to every one. From anthrax, or carbuncle, it differs in only having one point of suppuration—the core—while the former has several or many such centres. The furuncle also is inclined to be rounded or acuminate; carbuncle is flat. Furuncle is small; carbuncle varies in size, from half an inch to three or four or more inches in diameter; furuncle is tender to the touch; carbuncle, though spontaneously painful, is not tender. Boils generally occur in numbers; carbuncle is commonly single. Now and then certain pustular syphilodermata resemble boils, but their indolence, painlessness and darker, duskier color, together with the chronic slow course which they run when unaffected by treatment, will rarely give rise to difficulty in the diagnosis.

The successful treatment of boils is, at times, by no means easy. Each case demands careful study, with the view, if possible, of ascertaining the cause at work, and obviating this, if it can be done. The various functions of the body are to be carefully regulated. The diet should be of good quality and varied. Wine and malt liquors may be prescribed in rare cases, and when the patient is not accustomed to their use. The regimen should be moderate and conducive to the general improvement of the system. Fresh air and out-door exercise are to be urged in most cases. Tonics are very often called for. Quinine in considerable doses, as much as sixteen grains per diem, and iron, alone or with strychnia, may be given. Cod-liver oil is also suitable in some cases. The *mistura ferri acida*, so often prescribed in eczema, etc., is useful at times.

Arsenic, alone or in combination with iron, is sometimes useful. The following is a convenient formula:—

R. *Liquor potassæ arsenitis*, fʒj-ij
Vini ferri, ad fʒiv. M.

SIG.—Teaspoonful, three times a day, after meals.

Other remedies are: the sulphite or hyposulphite of sodium,

in fifteen to thirty-grain doses, every two or three hours; sulphide of calcium, in doses of one-eighth to one-quarter of a grain every two hours; liquor potassæ, in ten to twenty minim doses, with a bitter infusion, as calumba or quassia; fresh yeast, in tablespoonful doses, three times daily; syrup of the hypophosphites of lime, iron, soda and potassa; tar water, up to a quart daily, and phosphorus. My friend, the late Dr. Elliott Richardson, was accustomed to prescribe, with excellent effect, a lemon, the juice of which made into a strong lemonade was to be taken once a day, in the morning. Such are the remedies most usually relied upon in the treatment of furunculosis. No one can be recommended as a specific; what will do good in one case may fail in another.

Locally, one method of aborting the forming boil may be recommended; it is, when a hair is growing out of the centre of the boil to pull it out. This will sometimes check the further development of the boil. The application of cold, in the form of powdered-ice poultices, is recommended by Hebra. The use of caustics, as a red-hot needle, nitrate of silver, or a mixture of equal parts carbolic acid and glycerine, nitric acid, or acid nitrate of mercury, may be used to the apex of the forming boil. Of late a parasite, the *staphylococcus pyogenes aureus*, has been suggested as the true cause of furuncles, and parasiticide remedies have come into vogue. Dr. Louis J. Heitzmann, of New York, speaks very highly of salicylic acid applied in the form of a plaster:—

R.	Acid salicylic,	ʒ ij	
	Emplast. saponat.,	ʒ ij	
	Emplast. diachyli,	ʒ j.	M.

This is to be applied spread upon a cloth as an ordinary plaster.

A ten per cent. salicylic acid ointment well rubbed into the skin may be employed instead.

Ichthyol has been employed recently, rubbed into the skin in full strength. I have used a pigment of equal parts ichthyol and collodion with benefit.

Wilson recommends, when the areola is forming, the application of a galbanum plaster with opium, spread on chamois skin.

It is said that under this application the pain ceases, and the separation of the core takes place painlessly. When the boil begins to discharge, a hole is cut in the plaster, to permit the escape of the products of suppuration. When the areola is of considerable size, a starch poultice may be applied, or a linseed poultice smeared with resin cerate, or when there is much pain, made with lead water. Incisions should not be employed at any stage.

Gangrene of the Skin. (See *Dermatitis gangrenosa*.)

Glanders, called also *Farcy* and *Equinia*. A malignant, contagious disease, derived from the horse, and manifesting itself, after a period of incubation, by grave constitutional symptoms, with inflammation of the nasal and respiratory passages, and a deep-seated pustular, vegetating, tubercular ("farcy buds"), or hemorrhagic, ulcerative form of eruption. The disease is rare and frequently fatal.

The local treatment of glanders involves destruction of the virus by some cauterizing agent applied to each ulcer. Nitric acid, carbolic acid, and chlorine water, are to be preferred. As the abscesses form they should be opened and kept constantly cleansed by injections of permanganate of potassium solution and by carbolic acid. Ulcers of the nostrils are to be touched and washed with carbolic acid solution, and touched with tincture of iodine or solution of nitrate of silver. Internally, arsenic, nux vomica, carbolic acid, and especially iodide of potassium, are recommended, in addition to which, the general symptoms arising in each case are to be vigorously combated.

Glossy Skin. (See *Atrophy of the Skin*.)

Goose Skin, called also *Cutis anserina*, *goose flesh*, etc., is a well known condition of the skin, marked by a prominence about the individual hair follicles, in acuminate papular form, sometimes covered with scanty epidermic scales, and usually penetrated by a hair. The condition is usually observed upon the trunk and the extensor surfaces of the limbs, and is the result of contracture in the cutaneous muscles surrounding the hair follicles. Like other forms of muscular contraction, cutis anserina is of a transient character, and this distinguishes it from the

closely similar affections known as "keratosis pilaris" and "mild ichthyosis" (see *Ichthyosis* and *Keratosis pilaris*), due to epidermic overgrowth and chronic in character. The usual causes of cutis anserina are sudden changes from heat to cold and *vice versa*, or strong moral impressions. The condition is rather a physiological than a pathological one.

Graying of the Hair. (See *Canities*.)

Grocers' Itch. Eczema of the hands and arms, due to the irritation produced by handling sugar.

Gumma. (See *Syphilis of the Skin*.)

Hæmatidrosis. This affection, known also as *bloody sweat*, *ephidrosis cruenta*, *sudor sanguinosa*, *diapedesis*, etc., is a hemorrhage from the unbroken skin through the orifices of the sweat-ducts. There is, perhaps, no such thing as an actual pouring out of blood as a secretion of the sweat-glands, the hemorrhage in question probably occurring from the plexus of blood vessels surrounding the glands into the ducts of these glands.

The affection, though excessively rare, is so striking as to attract universal attention, and, consequently, records of its occurrence are found, not only in medical, but also in historical works. A shallow skepticism, denying all extraordinary phenomena not coming within its own immediate observation, had, at the beginning of the century, swept aside all accounts of sweating blood as fabulous. More accurate observation has of late years established the fact that, under certain conditions, blood, in a more or less pure condition, may exude from the orifices of the sweat-glands. The mechanism by which this exudation takes place has not as yet, however, been satisfactorily explained, nor is it likely to be explained until we know much more, both of the physiology of the sweat secretion and of the circulation of the blood. A hemorrhage takes place from the capillary plexus about the gland coil and into the gland duct, but whether this is the result of passive dilatation, increased blood pressure, alteration in the structure of the vascular walls, or in the composition of the circulating fluid, cannot, in the present state of our knowledge, be positively

stated. The process has some points of resemblance with that which goes on in purpura (see *Purpura*).

As regards the appearances presented to the eye, these vary in different cases reported. Sometimes blood oozes or spurts from the uninjured and unchanged skin. At other times an erythematous patch first forms, or a thin scale, which is later lifted up by the sanguineous exudation beneath. At other times a miliaria-like, vesicular eruption precedes the diapedesis.

Hæmatidrosis may occur in either sex, and among those apparently in the enjoyment of good health as well as among those who belong to "bleeder" families, or who are in a low state of vitality. In many cases the affection occurs in connection with vicarious or disordered menstruation. At other times it may occur as the result of an impoverished condition of the blood, or from sudden and strong moral impressions, as fright, anguish, etc.

At times fever with high blood-pressure precedes the effusion, while at other times a state of depression with slow pulse ushers in the phenomenon. Occasionally the affection is one of a number of symptoms connected with purpura, etc.

The diagnosis of the disease presents no difficulty, excepting in those cases in which simulation may be suspected.

The treatment of the disease must in many cases be purely empirical, and be directed by circumstances. When, however, there are indications of increased excitement and vascular tension, the abstraction of blood by a vein is called for. Closely allied to hæmatidrosis is the curious affection known as *Stigmata*.

Hair, Diseases of. Some of these will be found treated of under the heads of *Alopecia*, *Hypertrichosis*, *Nævus pilosus*, *Canities*, with the fungous affections, *Tinea tonsurans* and *Tinea favosa*. The affections to be treated here are those which involve the structure of the hair shaft itself. Excepting for the fact that they are disfiguring and annoying to those affected, the diseases here to be considered would scarcely merit attention, were it not that the careful study of such changes and diseases

of the appendages of the skin are calculated to assist in the solution of the general problems of pathology.

That disease of the hair which is most frequently observed is atrophy, *Atrophia pilorum propria*. Whether or not a true progressive and morbid diminution in bulk of the hairs takes place, it is certain that their physiological term of life may, under some circumstances, be diminished. The hairs lose their normal condition, become dry, lustreless, rough, brittle, cleft and fibrillated; they swell out and break off. These changes often take place as the result of morbid processes occurring in the parts from which the hairs arise—their follicles, the sebaceous glands, or the cutaneous structures immediately adjoining. After fevers and other severe constitutional disturbances likewise the hair may become dry and lustreless, and tend to fracture and splitting.

In addition to these conditions which affect the hairs in general, there are several forms of atrophic structural alteration which must for the present be termed idiopathic, because we cannot assign any cause for them.

One of these is the well-known phenomenon known as *scissura pilorum*, in which the hairs become split up at their extremities. In some persons, particularly in females with long hair, or men with long beards, nearly all the hairs split up in this way. But this splitting is probably without significance, and does not affect the growth of the hair.

Duhring has reported a single case of an "undescribed form of atrophy of the hair of the beard," characterized by atrophy of the hair bulb and by splitting of the hair substance. To the naked eye the affected hairs varied in size and form, some having a uniform diameter several times greater than normal, while others throughout their length were unusually slender. The bulbs were in nearly all instances smaller than normal, and had a markedly contracted look. Not infrequently the diameter of the bulb and root were considerably less than that of the shaft. The majority of the hairs showed splitting into two, three, or more parts throughout their entire length. Under the micro-

scope, atrophy of the bulbs and fission of the hair substance were the conspicuous features. In the majority of the specimens the bulbs were distinctly shrunken and atrophied, appearing as small, contracted points or knobs. The hairs, as a rule, began to split within the bulb.

Another decidedly pathological condition is that to which, at first, the rather cumbersome name of "swelling and bursting of the hairs," was given, but which is now called *tricorrhæxis nodosa*, the name by which this affection is now generally known.

This affection is usually confined to the hairs of the beard and the eyebrows, though at least one case has been observed in which the hairs of the scalp were involved. The affected hairs show exceedingly small, somewhat transparent or glistening, conical swellings. There may be one, two, five, or more on the same hair shaft; the little nodes being placed at various distances from one another, like pearls on a string. On a slight examination they might be taken for ova adherent to the hair, but on closer inspection they are found to belong to the hair itself, and do not consist of adherent masses.

Some hairs have a conical, or fan- or brush-shaped enlargement at the end of each, and if this occurs on many hairs, on the moustache, for instance, the impression is conveyed that the hair has been singed by a flame, and has curled up at the burned end. The hairs thus affected are firmly fixed on their papillæ, but break easily at the seat of the swellings. The stump of the hair which remains shows the lower half of a node as its extremity.

Microscopic examination shows the nodes to consist of spindle-shaped swellings produced by a splitting asunder of the fibres of the hair structure, so that the appearance presented is that of two besoms or birch brooms rammed end-to-end together. It would seem that a separation or swelling takes place in the body of the hair, and that this produces a lighter color in the hair at the nodal points, as seen by reflected light, while the splitting takes place at a later stage of the disease.

shaving, though this often proves only a temporary relief. The following ointment has been employed with success:—

R. Pulvis zinci oxidi, gr. xvj
 Flor. sulphuris, $\overline{3}$ ss
 Ung. adipis, $\overline{3}$ ij- $\overline{3}$ iv. M.

SIG.—Rub in morning and evening.

I cannot say that this promises much, but it is the best we have. When fragilitas crinium is connected with a generally debilitated condition of the hair, arsenic and cod-liver oil may sometimes be of use by improving the general nutrition.

Heat, Prickly. (See *Miliaria*.)

Hemiatrophia facialis. (See *Atrophy of the Skin*.)

Hereditary Syphilis, Skin Affections in. (See *Skin Diseases in Hereditary Syphilis*.)

Herpes. A skin affection, characterized by the appearance of one or many discrete, transparent vesicles, varying from the size of a pin head to that of a small pea, commonly occurring in groups or clusters and seated on an inflamed base. The eruption is apt to occur along the line of distribution of nerves. The lesions run a pretty uniform course, lasting from eight to ten or fourteen days. The clear serous contents of the vesicles first become clouded and then gradually dry up, with the formation of yellowish crusts, which fall off, leaving transitory spots of pigmentation. The appearance of the eruption is usually preceded or accompanied, or both, by more or less burning, and, in the case of herpes zoster, by pain either localized in the eruption or distributed along the line of the nerve supply.

There are three forms of herpes: *H. simplex*, *H. progenitalis* and *H. zoster*. The affection known as “herpes iris” on account of its herpetiform lesions, is a variety of erythema multiforme, under which head it will be found described.

The three forms of herpes are so different in their location and course that they are usually described as entirely separate and distinct diseases. *H. zoster*, for instance, never, or most rarely, recurs in the same individual. *H. simplex* may recur at

any time, and in some cases does recur periodically, while *H. progenitalis* recurs inveterately in some cases.

But there is some link of union between the affections, in addition to their close adherence to the herpetic type of lesion, and to their occurrence along the distribution of nerves, and as a result of nerve-ganglionic or reflex causes. This is shown by the fact, occasionally observed, of the simultaneous occurrence of the different forms of herpes. I have recently had under observation a case in which well-marked herpes zoster of the front of the neck and cheek was accompanied by a characteristic *H. simplex* (var. *labialis*), "fever blisters." Another case, also under observation at the same time, showed a simultaneous outbreak of *H. zoster* of the buttock and *H. progenitalis*.

Herpes Simplex. This form of herpes was formerly known as *H. labialis* or *H. facialis*, but this designation is too narrow, as the eruption may be, and frequently is, met with in other parts of the face—the cheeks, *alæ nasi*, eyelids, and ears being occasionally attacked, and is also, though rarely, met with on the body or limbs. Occurring about the lips and nose, the eruption is popularly termed "fever blister" or "cold sore." There is a form of herpetic eruption about the tonsils and adjacent parts, accompanied by high fever, and occasionally appearing epidemic in character, which closely resembles "follicular tonsillitis," but may readily be distinguished by the strictly herpetic character of the lesions.

When the lips are attacked by herpes simplex, one only is usually affected, the lesions commonly occurring at the boundary between the skin and mucous membrane. The lower lip is most frequently attacked. The lesions here not infrequently coalesce and form a bleb. The contents of the vesicles dry up within from three to six days, and form brownish or yellowish crusts which loosen and fall off spontaneously. When the crusts are prematurely detached the cure is delayed.

Herpes of the lips is a frequent concomitant of various general disturbances. Slight ailments of the digestive organs, affections of the chest, as pneumonia or pleurisy, malarial fevers, etc., are

often accompanied by an outbreak of herpes of the lips. This was formerly believed to be of critical significance, but is now thought to have no connection with the course or severity of the dominant affection. Some women have an eruption of herpes on the lips before, during, or after each menstrual period. Eruptions of herpes of the lip are observed repeatedly following the use of a dental instrument in filling the teeth.

Herpes may occur upon the mucous membrane of the tongue and of the oral cavity generally. The lesions here lose their vesicular character, because the epidermic cover is macerated away almost as quickly as it forms, and a shallow ulcer, the well-known "canker" of the mouth, results.

Herpes of the nostril and *alæ nasi* is a frequent result of a cold in the head. It presents no peculiarities other than those mentioned in speaking of herpes of the lips.

Herpes of other parts of the face is sometimes quite a striking affection. The following case will give an idea of its appearance and course:—

A hackman was exposed during the greater part of a raw, inclement night without adequate clothing. Returning home at daylight, he washed his carriage and then, thoroughly exhausted and chilled through, flung himself down in his wet clothing and slept for several hours. On waking he had a severe chill, followed by feverishness and general soreness about the limbs, which, however, did not confine him to bed. Forty-eight hours later, on shaving in the morning, he began suddenly to experience a burning sensation in the face, which soon swelled up and displayed numerous incipient vesicles. The sensation of burning continued to grow more severe until the patient was deprived by it of sleep. The affection reached its height in about three days, when the whole face was covered and disfigured by a copious eruption of discrete vesicles, with clear or cloudy contents, grouped chiefly about the lips, the angles of the mouth and nose, and to some extent upon the cheek and chin, a few scattered lesions being also seen elsewhere. The vesicles were seated upon inflamed bases, and these centres of inflammation coalesced and

caused such a swelling of the lips and the skin as to make the features and expression almost indistinguishable. On the mucous surface of the lips within were numerous herpetic ulcers. Under appropriate local treatment the eruption quickly subsided, and at the end of ten days the patient was well.

Herpes simplex is almost unquestionably a neurosis of the skin. Although in no case has any anatomical change in the nerve trunks, in the ganglia, or in the nerve centres, been found, as in *H. zoster*, to account for its occurrence, yet the facts that it is found in the areas of distribution of certain cutaneous nerves, that it resembles so closely *H. zoster*, and that it seems sometimes to occur as the result of reflex impressions, all point to a nervous origin.

The diagnosis of herpes simplex is rarely difficult. The peculiar discrete character of the eruption, the well-filled vesicles, each on a more or less inflamed base, sometimes coalescing in the later stages, but always showing the character of distinctness, the fact that the group of lesions is sharply defined, and also that the lesions tend to dry up in their entirety rather than to run together, point toward the disease in question. Moreover, the fact that herpes runs a regular and strictly limited course is highly characteristic.

Herpes upon the line of junction between the skin and mucous membrane, and upon the mucous surface of the lips, especially when it occurs near the commissure, may sometimes be mistaken for the initial lesion of syphilis or for mucous patches.

From the initial lesion herpes is distinguished by its more superficial character and the absence of infiltration, as well as by the absence of glandular involvement, the submental and other neighboring glands being invariably involved in connection with the syphilitic lesion.

Mucous patches in the oral cavity are sometimes mistaken for herpes, but the mucous patch is almost always much larger and more superficial, with a squarish outline and a flat gray floor, with usually a narrow red border. The herpetic ulcer is small,

circular, or "polycyclic" in outline, and concave, with sharply-defined edges.

Herpes upon the skin of the face may be mistaken for herpes zoster and for eczema, and, possibly, in rare cases, for dermatitis venenata. From H. zoster it is distinguished by the absence of neuralgia and the more diffuse outline of the grouped lesions. Moreover, herpes zoster never, in my experience, attacks the opening of the nostrils or the muco-cutaneous juncture of the lips. H. simplex facialis likewise runs a more rapid course than H. zoster.

Eczema vesiculosum of the face is always marked by the fact that the commingled lesions run together, and are never made up of discrete vesicles. There is also an absence of the red base observed in the lesions of H. facialis, and in eczema some characteristic lesions are almost always found in places rarely or never attacked by herpes. Finally, the course of an eczema is not a brief and limited one like that of herpes, but tends rather to an irregular and often chronic prolongation.

Dermatitis venenata shows lesions often resembling those of herpes, but the distribution is almost invariably different, and the tendency to spread and to appear in other localities is quite marked. There is, furthermore, in dermatitis venenata almost always a history of exposure to the emanations of the poison vine.

The *treatment* of herpes simplex is very simple, being confined to the local use of soothing and emollient applications. In herpes of the lip a little cold cream, diachylon or diluted oxide of zinc ointment, is all that is required. Care must be taken not to detach the crusts prematurely, as this lengthens the duration of the affection. In cases of extensive herpes of the face, like the one described above, a soothing application, as a poultice of bread crumb and dilute lead water, will give relief, a mild ointment being substituted for this when the crusts begin to form.

The *prognosis* is very favorable in all cases of herpes simplex,

the affection running a definite course. Its duration, however, cannot be shortened, and all the popular remedies for cutting short an attack of herpes of the lip must fail, except in cases in which the lesions themselves are abortive and ephemeral.

Herpes progenitalis is found on both males and females. The vesicles are usually four to six in number, varying in size from that of a pin's head to that of a split pea. They occur usually close together and are apt to coalesce. The whole area covered by the group of lesions is not greater than that of a quarter-dollar. The parts usually affected are, in the male, the preputial sulcus, the lining of the prepuce, the glans, the margin of the prepuce and, more rarely, the shaft of the penis. In women, herpes progenitalis is very uncommon, excepting among prostitutes. The lesions are found upon the labia minora, prepuce of the clitoris, labia majora, clitoris, introitus vaginae and, more rarely, on other neighboring parts. The attention of the patient is called to the eruption by a slight itching and burning sensation; a small, red patch is observed, on which a crop of vesicles, at first clear, but soon becoming purulent, is observed. If situated on the mucous membrane the vesicle soon breaks down, so that the lesion which is, in fact, first noticed is a superficial erosion. Unless irritated, the lesions tend to heal within a week or two. The tendency to relapse is very marked. In the female it may recur with each catamenial period, while in the male each coitus may be followed by an outbreak. Venereal diseases of a non-syphilitic character, as gonorrhœa and balanitis, seem to predispose to the occurrence of the affection. It is confined, in the male, to the periods of youth and early manhood, but in the female may occur as late as middle age. Herpes progenitalis is apt to be mistaken for chancroid. In the earlier stages, indeed, the individual lesions are identical in appearance in both diseases. The number and distribution of the lesions is a great help. The lesions of chancroid are not so numerous as those of herpes, and are not grouped together in the way the latter are. When multiple, the lesions of chancroid are the result of auto-inoculation, and

are, therefore, of different ages. Time, also, shows the difference. After a few days the herpetic sore begins to get better, while the chancroid is getting worse.

DIFFERENTIAL DIAGNOSIS

BETWEEN

HERPES PROGENITALIS.

1. Always begin as vesicles (though these very quickly break down).
2. Appear in groups.
3. Outline of larger patches "polycyclic," that is made up of circles intersecting one another.
4. Always or almost always, multiple.
5. Lesions always superficial.
6. Last but a few days.
7. Almost always a history of previous attacks. Exceedingly prone to relapse.
8. Lymphatic glands not enlarged.
9. Preceded often by burning and itching.
10. May or may not be caused by simple irritation in connection, and in women occurs sometimes about each menstrual epoch.

CHANCROID.

1. Usually begin as ulcers.
2. Ulcers do not group.
3. Outline of lesion smooth, roundish or ovalish. Never "polycyclic."
4. Single or few in number.
5. Lesions deep.
6. Last for over a week.
7. Not prone to repeated attacks.
8. Lymphatic glands enlarged and sometimes inflame and suppurate.
9. No premonitory symptoms.
10. Caused by impure connection.

The syphilitic initial lesion need not often be confounded with the herpetic vesicle. It does not begin as a vesicle; it is seldom multiple; it is indurated at some time in its course; is accompanied by indurated glands, and does not appear as a sore until some days after the exposure. In the female the later syphilitic lesions may sometimes be mistaken for herpes, and *vice versa*. The same principles of diagnosis which come into use in distinguishing herpes from the other affections above men-

tioned will, however, be found of service in such cases, and in any case careful observation of the lesions for several days will much assist the conclusion. Eczema of the genitalia may resemble herpes, but the itching and generally severe and more extensive character of the eczematous disease serves to distinguish it.

The treatment of herpes facialis is very simple, a soothing ointment being usually all that is required. Now and then, when the disease is extensive and spreads over the face with violently inflammatory symptoms, as occurs in rare cases, a poultice of bread crumb and cold, dilute lead water, or fomentations with lead water and laudanum, may be required for twenty-four or forty-eight hours, after which an ointment of a drachm of subnitrate of bismuth to the ounce of cold cream may be employed as the lesions dry up and crust. Herpes progenitalis usually requires very little treatment. Sometimes, however, various remedies are required. The best remedy for ordinary use is dilute lead water, applied on a soft piece of linen or a wisp of absorbent cotton. Black wash is a good dressing in many cases; or finely-powdered nitrate of bismuth may be used. Sometimes more stimulating applications are required. Powdered calomel, sprinkled on the erosions morning and night, or equal parts of calomel and oxide of zinc may be used. When the disease is prone to recur, astringent washes may be employed as a prophylactic. Circumcision is sometimes useful in inveterate cases occurring in the male, but even this has been known to fail.

Herpes Circinatus. (See *Herpes iris* and *Tinea circinata*.)

Herpes Gestationis. A rare affection of the skin peculiar to pregnancy. It consists in the development of erythema, papules, vesicles and bullæ, vesicles predominating. They are attended with intense itching and burning sensations. They are commonly grouped, but do not follow any nerve tracts. The vesicles and bullæ vary in size; they may be pea-sized or as large as a walnut. The lesions usually first appear on the extremities, and afterward involve other portions of the body.

It is an affection directly dependent upon the gravid state of the uterus. It may appear at any period of gestation, up to the seventh month, and, when present, usually continues until after delivery. It does not terminate its course immediately after delivery, but slowly retrogrades by the development of fewer and fewer vesicles; it is apt to recur with succeeding pregnancies. It is at times accompanied by urticaria, neuralgia and other neurotic affections. It appears to be a form of *Dermatitis herpetiformis* (q. v.).

Herpes Iris. (See *Erythema iris*.)

Herpes Pruriginosus. (See *Dermatitis herpetiformis*.)

Herpes Tonsurans. (See *Tinea tonsurans*.)

Herpes Zoster is an acute inflammatory disease, characterized by groups of vesicles, situated upon inflamed bases, usually accompanied by more or less neuralgic pain. The pain usually precedes the eruption, sometimes by several days. It is apt to be disproportionate to the amount of eruption. Occasionally it is entirely absent. The eruption makes its appearance in the form usually of an inflamed condition of the skin, attended with heat and burning sensations, and groups of discrete pin-head to split-pea sized vesicles, situated on a bright red surface, appear over the region. The vesicles are often crowded together so as to coalesce, forming irregular patches. (See colored plate, Fig. C.) New vesicles continue to appear until the fourth to the eighth day, when the eruption is at its height; it remains in this way a few days, and then begins to decrease, the vesicles shriveling, and by the tenth day or so leaving brown crusts, which drop off. The vesicles do not burst, as do those of eczema. Ten days to three weeks is the average duration of an attack. The eruption does not always run a typical course. Only a few vesicles may appear, or they may abort before fully developing. On the other hand they may suppurate and leave scars, though the disease commonly leaves no trace. The neuralgia varies from a very slight tingling to the most excruciating pain. Herpes zoster may attack any part of the body, but is commonly found upon the trunk and head; less frequently upon the limbs. It follows

very closely the course of the nerves, and the eruption is named according to the region upon which it occurs, as *H. Zoster capitis*, *H. Zoster brachialis*, *H. Zoster facialis*, etc. On the head it most frequently occurs in the course of the supra-orbital nerve, and it may affect the eye, giving rise to severe pain. On the head, both sides are sometimes affected; elsewhere the affection is almost always unilateral, so as to give rise to a popular superstition, that if the "shingles" (occurring on the trunk) should go all the way round the body the patient would certainly die. The chest is the commonest seat for the occurrence of the eruption; and the names formerly given to the disease, "*zona*," "*cingulum*,"—a girdle, indicate this. Involving the intercostal nerves, the neuralgia often causes the affection to be taken for pleurisy, until the eruption makes its appearance. When it occurs on the limbs the flexor surface is commonly attacked. It rarely occurs below the knee. The course of herpes zoster is acute, and though somewhat variable as to duration, it tends to recovery.

Herpes zoster rarely occurs twice in the same person. Now and then, however, cases are met with where it recurs year after year, perhaps six to nine times. Its etiology is obscure, but it is well recognized that the disease is dependent upon a peculiarly irritable or inflamed condition of the cutaneous nerve trunks and branches. In some cases, the disease consists in an inflammation of the spinal or other ganglia, the influence of which is carried forward, along the nerves, to their termination upon the skin.

The diagnosis of well-developed typical herpes zoster presents no difficulty. The neuralgic pain, the appearance of the vesicles in distinct groups, upon a highly inflammatory base, and the tendency to preserve their form intact, are characteristic. In eczema, which it most resembles, the lesions tend to exude moisture, dry and crust, while in herpes zoster there is no discharge. Eczema itches, *H. zoster* burns. From simple herpes, *H. zoster* is distinguished by the presence of pain, by its non-recurrence, its unilateral character, and by its rare occurrence upon the favorite seats of *H. simplex*, the lips, alæ of the nose, and genitalia.

The treatment of herpes zoster is largely palliative. The disease runs a naturally favorable course, tending to recovery, and the symptoms of neuralgia and burning in the seat of eruption alone require treatment. For the neuralgia, the phosphide of zinc, in doses of one-third of a grain, may be given at the commencement of an attack, and repeated every three hours. It may be combined with one-sixth of a grain of extract of *nux vomica*. If this fails, in severe neuralgic cases, morphia may be given at night. Of late antipyrine has been employed with marked success. Electricity, in the form of the constant galvanic current, often gives relief. Five to ten cells may be used, the sponge electrodes being placed along the course of the nerves, and directly to the seat of the eruption. The application should be made once, or if possible, twice a day, for fifteen minutes at a sitting. This application also relieves the after-pains of herpes zoster, when these supervene on the eruptive stage. Among local applications, powders are only available when, by any chance, the vesicles have become ruptured. In other cases, lotions, ointments, or pigments, are more convenient. The following is a convenient powder:—

R. Pulv. amyli,
 Pulv. zinci oxidi, aa ℥ ss
 Pulv. morphiæ sulphat, gr. ij. M.

It is a good plan to sew a soft flannel bandage around the affected part, if the locality will admit, after the application of this powder, to be removed only when required. This will prevent the rubbing of the clothing, which is very irritating. Among lotions, lead water, lead water and laudanum, fluid extract of *grindelia robusta*, half an ounce to the pint of water, or the following zinc lotion:—

R. Zinci carbonat. præcip.,
 Pulv. zinci oxidi,
 Pulv. amyli,
 Glycerinæ, aa ℥ iv
 Aquæ, Oss. M.

Ointments containing fifteen to twenty grains of extract of

opium or extract of belladonna to the ounce, may be applied, spread upon cloths, or rubbed in with the finger, when the eruption occurs on the scalp. Among pigments, the essential oil of peppermint, painted over the course of the affected nerve, and over the vesicles, if unbroken, is a very good application. Perhaps, the best application of all, in painful herpes zoster, is the following :—

R. Morphine, gr. v
Collodii, ℥ 3 ss. M.

Put a brush in the cork.

This may be painted over the vesicles, broken or unbroken, twice, or even three times, daily, and acts both as a protective and anodyne, at the same time.

The prognosis of herpes zoster is almost always favorable, the eruption running its course in a few weeks, in almost all cases, excepting in the aged, when the neuralgia is apt to persist. H. zoster of the orbital region, however, sometimes endangers the eye, and may be followed by deep scars over the scalp with neuralgia and anomalous sensations in the skin.

Hirsuties. (See *Hypertrichosis*.)

Hives. A popular name for various diseases of the skin, and other parts. In this country, sixty years ago, "Hives" was understood to mean what is now commonly called croup. Hence the name of the popular compound syrup of squills, "Coxe's Hive Syrup." In England, the term hives is applied to various skin diseases, chiefly, however, to chicken-pox or varicella. In this country, at the present time, a patient who is said to "have the hives" will almost invariably be found to suffer from urticaria. (See *Urticaria*.)

Hordeolum, or sty, is a small boil, seated at the edge of the eyelids, and involving a Meibomian gland. It is not an active kind of boil, but progresses sluggishly, the pustule centre being small. It is painful, and some time elapses before all traces of its existence go. There may be one, two, or more, on one or both eyelids. The general treatment is that of a boil. (See *Furuncle*.) I have obtained the best results from the

administration of calcium sulphide in doses of $\frac{1}{10}$ grain every hour, until ten have been taken ; to be repeated daily. Externally, an ointment of ten grains of red oxide of mercury to the ounce will be found useful in stimulating the lids to a healthy condition.

Horn, Cutaneous. (See *Cornu cutaneum*.)

Hydroa. (See *Erythema iris* and *Dermatitis herpetiformis*.)

Hyperidrosis. Excessive sweating. The condition may arise in health from heat, muscular exercise, the ingestion of hot drinks, etc., and in fevers, phthisis, and certain affections of the peripheral, central and sympathetic nervous systems as a symptom of more or less importance.—

Hyperidrosis may, moreover, occur as a substantive affection, and, looking at it from this point of view, it may be described as a functional disorder of the sweat glands consisting in an increased flow of sweat.

It may vary greatly in degree, from an amount scarcely in excess of health to an almost profuse transudation. The local form of the disease, which is by far the most common, may occur upon almost any portion of the body, but is more commonly encountered about the palms, soles, axillæ and genitals. It may or may not be symmetrical, and is sometimes constant, while at other times it is intermittent or paroxysmal. Yandell reports a case in which the flow occurred daily at the same hour. Numerous cases of unilateral sweating are on record.

Hyperidrosis upon the palms and soles is sometimes excessive. From the palms it may be so profuse that the fluid will accumulate in the hollow of the hand until it runs over the edge. Upon wiping off the secretion in these severe cases the skin is observed whitish, damp and sodden. The flow appears to come from the whole surface. The soles show the disease to a still more marked degree at times, the soaked epidermis becoming macerated and peeling off, and leaving the tender skin exposed. The pain on walking is often so severe as to keep the patient off his feet. Hyperidrosis of the sole is almost always accompanied by

decomposition of the sweat, which gives rise to a peculiar penetrating odor (see *Bromidrosis*).

The causes of hyperidrosis, other than those mentioned above, are not known. It affects the cleanly and the dirty, the sickly and the healthy alike, and is met with in persons of all ages and both sexes. In addition to diseases of the nervous system, debility, malaria, and occasionally functional or organic disease of the internal organs, as the heart and lungs, may give rise to hyperidrosis. The affection is aggravated by high temperature, and is usually, though not always, worse in summer than in winter. Excitement of any kind, physical or mental, increases the flow of sweat.

The treatment of hyperidrosis must vary with the individual case. When the cause is proximately or exactly known, internal remedies appropriate to the general condition may be employed with good effect. If there be debility, a general tonic treatment is indicated. Iron, quinia, strychnia and the mineral acids, especially aromatic sulphuric acid, in ten or twenty-drop doses, twice or thrice daily, may be used with advantage. Atropia is the most efficient remedy, and may be used at first to gain time for the further investigation of a case, or to introduce other treatment; its effect is apt to be temporary, however. It may be given by the stomach in doses of $\frac{1}{200}$ to $\frac{1}{50}$ grain, dissolved in water, three times a day, until the physiological effects are produced. Or, in some cases, the hypodermic use of the drug may be found advisable, in the same dose, only with more caution. Pilocarpine has been highly recommended by some writers. Tincture of jaborandi, in doses of five to ten minims every second or third hour, or the muriate (or nitrate?) of pilocarpine, in pill form, in the dose of $\frac{1}{20}$ grain at similar intervals, may be prescribed.

Local treatment in hyperidrosis is particularly useful, and, in some cases, may alone be required. Patients are apt to use too much water, particularly warm water, in washing the parts too frequently. The parts affected should be washed as rarely as possible—only when they are really *dirty*. They should be

wiped, however, from time to time, with a damp cloth, and immediately dried with a soft towel, without friction. Various dusting powders, as starch, lycopodium, magnesia and oxide of zinc, or the same with the addition of half a drachm of salicylic acid to the ounce may be used. The following combination is useful :—

R. Pulv. acid. salicylic.,
 Pulv. zinc. carb. præcip.,
 Pulv. magnesiæ ustæ, . . . aa . . . $\overline{3}$ iv
 Pulv. amyli, $\overline{3}$ xv
 Pulv. talci, $\overline{3}$ xx. M.

The powder should be removed and renewed so soon as it becomes moist and caked. Chloral in powder, in the proportion of one drachm to one ounce of starch powder, is one of the most efficient of all these powders. They are ordinarily only serviceable in mild cases. Slight cases of hyperidrosis may also often be cured by the use of juniper tar, carbolic acid and sulphur soaps. Lotions containing alcohol, alone or with the addition of some astringent, will be found useful. The following is a convenient formula :—

R. Acidi tannici, $\overline{3}$ j
 Alcoholis, f $\overline{3}$ viiij. M.

SIG.—Use as a lotion.

Salt baths are sometimes found serviceable. Tincture of belladonna, diluted or in full strength, may be employed, its constitutional effects being guarded against. Weak solutions of chloral, permanganate of potassium, and salicylic acid, have been employed with success. In hyperidrosis of the palms and soles, washing with carbolic acid or juniper tar soap may be followed by the application of the following ointment, spread upon cloths, and kept in place with a bandage :—

R. Ung. picis, U. S. P.,
 Ung. sulphuris, U. S. P., . . . aa . . . $\overline{3}$ ss. M.

In obstinate and severe cases, especially when the soles of the feet are affected, Hebra's treatment is the best. It is as fol-

lows: The parts having been cleansed with soap and water, the following ointment is applied:—

R. Emplast. diachyli,
Olei olivæ, aa ℥iv. M.

The plaster is to be melted, and the oil added and stirred until a homogeneous mass results.

Pieces of muslin or cotton cloth are to be cut to the size of the parts, and the ointment spread on thickly and applied. Lint, smeared with the ointment, is also to be placed between the toes (or fingers), so that every portion of the skin may be completely covered with a layer of the ointment. The dressings are to be bound down closely, by means of a bandage. The cloths are to be changed twice in the twenty-four hours, when the parts are *not* to be washed, but simply rubbed dry with lint and a starch-dusting powder, after which new dressings are to be applied in exactly the same manner. This treatment is to be continued from one to several weeks, according to the severity of the case. Even when the disease is on the soles, the patient may be permitted to walk about in loose shoes. At the expiration of eight or ten days the parts are to be rubbed with the dusting powder and the dressings discontinued. The powder should be used for several weeks longer. Usually the sweating tends to lessen and gradually disappear after two or three weeks from the beginning of the treatment. A repetition of the course in severe cases is sometimes necessary before attaining a complete cure.

Of course, the patient must give up his occupation while undergoing this treatment—a sacrifice of time which is impossible in many cases. When, however, circumstances will permit, the treatment just described will succeed when milder measures, however faithfully applied, have failed.

The prognosis of hyperidrosis depends somewhat upon the state of the patient's health, the duration and locality of the disease and its extent. Many cases are easily cured, while others are extremely intractable. The ability of the patient to follow the treatment must also be considered, as careful attention to the directions given is almost essential to a cure.

Hyperæsthesia of the Skin. Simple, augmented natural sensibility may be either general or local, diffused or circumscribed, unilateral or symmetrical. The temperature, as a rule, remains normal. The causes are varied, the condition being due either to some functional derangement of the nervous system, or to some organic disease connected with the nerve centres or trunks. Hysteria and allied states are well-known causes; also diseases of the brain, spinal cord and nerves. The sensation in the parts is unduly exalted, the patient experiencing discomfort from contact with the air, clothes, and other objects. The skin is often exquisitely sensitive to all impressions. In duration it may be permanent or temporary, according to the cause which has occasioned it (Duhring).

The treatment of hyperæsthesia and of its allied condition, dermatalgia, or pain in the skin, will depend upon whether it be idiopathic or symptomatic. Of course, the general tone of the system must be examined into with great care, and any aberration from the standard of health corrected, if possible. The idiopathic form gets well spontaneously, in many cases, after a few weeks. Local applications, however, may be demanded for acute symptoms. Blisters to the part, the galvanic current, and applications containing tincture of belladonna, of aconite root, or of iodine, and also the essential oils, as Japanese mint, oil of cloves, etc., may be used. Applications of very hot water are temporarily useful, also vapor baths, in general cutaneous pain. (See *Dermatalgia*).

Hypertrichosis, or *hirsuties*, is a condition of abnormal hair growth, whether occurring in localities where no marked appearance of hair is usual, or consisting simply of an extreme development of hair in localities where this is usually found. The following varieties are recognized:—

I. **HYPERTRICHOSIS DEPENDENT UPON HEREDITY OR UPON SOME INFLUENCE EXERTED DURING INTRA-UTERINE LIFE. HEREDITARY HYPERTRICHOSIS.**

Sub-class *A*.—*Hypertrichosis universalis*: Including, 1. The so-called hairy men; 2. General extreme hairiness of the human body.

Sub-class *B*.—*Hypertrichosis localis*: 1. Abnormal growths of hair occurring upon localities where the skin is apparently unaltered; 2. Abnormal growths of hair occurring upon pigmented and hypertrophic patches of skin.

II. HYPERTRICHOSIS OCCURRING IN EXTRA-UTERINE LIFE.
ACQUIRED HYPERTRICHOSIS.

1. *Hypertrichosis neurotica*, occurring as the result of neurotic influence; 2. *Hypertrichosis irritativa*, occurring as the result of irritation or stimulation of the skin.

There are certain localities, as the palms, the soles, the terminal phalanges of the fingers and toes, the inner surface of the prepuce, the glans penis, the upper eyelids and the vermilion border of the lips, which never present any growth of hair, even of lanugo or downy hairs. These are never affected by hypertrichosis in any form.

The rarest and most extraordinary form of hypertrichosis is hereditary hypertrichosis universalis, of which the Russian "dog-faced man," who was recently on exhibition, and the Spanish dancer Julia Pastraña, whose portrait is here given, are striking examples.

In all cases of this class there is a general hairiness of the whole body, with the exception of the parts above mentioned, although this hairiness differs in degree in different localities, being usually most striking upon the face, and giving the individual a certain resemblance to a wild animal.

The thick coating of hair with which the foetus is covered during the fifth and sixth months of intra-uterine life is constantly arranged in certain lines and whorls. This arrangement is the same in the form of hypertrichosis under consideration. Moreover the hair is fine and silky, resembling lanugo rather than fully developed hairs. For these reasons it has been supposed that hypertrichosis universalis is a condition of arrest of development, with persistence and further development of the embryonal hairy covering.

The hereditary character of hypertrichosis universalis has been proved in the case of the Russian "dog-man," in the so-called

"hairy family" kept by the late king Thebaw, of Mandalay, and in the case of Julia Pastrana, who had a daughter also hairy.

"Hairy men" usually show some defect in the teeth. It is a curious fact that in congenital alopecia a similar deformity has been noted.

FIG. 10.

HYPERTRICHOSIS UNIVERSALIS (JULIA PASTRANA). *After Ecker.*

A typical variety of hypertrichosis localis is that presented in "bearded women," of which the case published by Duhring some years ago, and which I also had an opportunity of seeing, is a striking specimen. The patient was a married woman, twenty-three years of age, of delicate frame and feminine characteristics, the mother of two children. The history of the case showed the

growth on the face to have commenced about the age of ten, and to have progressed steadily, without being influenced one way or the other by the development of puberty, until the woman was eighteen years of age, and then to have remained stationary. The hair of the scalp at the time of examination was short and quite thin, the eyebrows and lashes were normal, while the upper lip, cheeks, chin, and submaxillary region were the seat of hair in the form of full moustache and beard which involved exactly the same regions as in the male. The hair was fine and black in color, and viewed in its entirety the beard would be termed full, thick and handsome, and was such as is not infrequently met with in men who have never shaved.

Extending from shoulder to shoulder, over the back, there existed sufficient hair to constitute a diffused hairy patch about the width of a hand. The whole of the back on either side, from the scapula downward, was covered sparsely with hair, starting from either side of the spinal column and taking a course downward and forward around the sides of the thorax, covering the lateral portions of the trunk. The thighs and legs were slightly hairy, and the arms from the shoulders down were decidedly so. The axillæ and pubic region showed no unusual amount of hairiness.

Belonging also to this form of hypertrichosis are those cases of precocious development of hair in localities where this would naturally appear at a later stage of development, *e. g.*, the case of a six-year-old girl who showed the hairy development about the genitalia usually observed in a woman twenty years of age, and also the cases of boys with moustache, beard, etc.

Circumscribed hypertrichosis over a limited region of unaltered skin, where the hair is not usually developed to a marked degree, is apt to be met with over the sacral region and the loins. In the latter locality it not infrequently occurs with spina bifida.

A somewhat strange peculiarity among those presented by hereditary hypertrichosis is shown in the form known as hypertrichosis senilis, where an increased growth of hair occurs in

elderly people in the beard, eyebrows, upon the cheeks and nose, and particularly within the nostrils and ears.*

A not very uncommon variety of inherited hypertrichosis is that which is usually known as hairy mole, or hairy nævus, where

FIG. 11.



FIG. 12.

HYPERTRICHOSIS LOCALIS. *After Ecker.*

the excessive growth of hair occurs upon a pigmented, more or less rugous, hypertrophic patch of skin, and not infrequently in connection with the growths of molluscum fibrosum.

* A striking picture of this last will be found in Burnett's work on the Ear, 2d. Ed.

The cause or causes which produce the varieties of inherited hypertrichosis above described are practically unknown. An arrest of development in the first form and a "neurotic influence" in the latter form are all that can be suggested. The fact that hairy naevi are frequently, in fact almost always, so situated as to be referred to the distribution of some nerve gives grounds for supposing a nervous influence as the cause of the abnormality.

The second class of hypertrichosis cases, those included under the designation *hirsuties acquisita* or *transitoria*, includes those in which the abnormal hairiness is due to some pathological influence acting during extra-uterine life.

The first variety of this class is known as hypertrichosis *neurotica*. Erb and Schiefferdecker describe cases in which excessive growth of hair has followed upon spinal paralysis. The latter also observed soldiers suffering from numerous trophic disturbances following gunshot wounds who almost invariably showed accompanying excessive growth of hair.

Cases in which excessive growth of hair has followed upon local irritation, as that described by Gueterbock, where hair grew on a porter's shoulder at the spot where the burdens rested, or as Rayer's case, where the repeated application of blisters, continued for months, was followed by local hypertrichosis, are not very numerous, and have never been critically examined into.

The *treatment* of hypertrichosis is only a matter of practical interest when the hairy growth occupies such a position as to make it a conspicuous deformity. Hairy moles may sometimes be removed by the knife when favorably situated and not too large. Circumscribed or diffuse growths of hair, occurring chiefly about the face and in females, are best removed by electrolysis. In former times epilation, shaving, and the application of caustic depilatories formed the only modes of treatment, and these were highly unsatisfactory, as only in part removing the disfigurement, and at the same time requiring frequent repetition. In fact, epilation by means of forceps is said, and probably with truth, to stimulate the growth of new hair in the neighborhood.

To Michel and to Hardaway, of St. Louis, we are indebted

for a safe, easy, and effectual method of removing superfluous hairs by electrolysis. Though electrolysis had been suggested at a somewhat earlier date by Piffard, as a means of destroying the hairs in hairy nævi, the method was first employed systematically by Michel in trichiasis, and was adapted to general dermatological use by Hardaway, who read a paper upon the subject before the American Dermatological Association in 1878.

The operation, as described by Hardaway, is performed as follows: A No. 13 cambric needle is attached to any convenient handle, which latter is connected with the negative wire of a galvanic battery; a moistened sponge-electrode is connected with the positive pole. Under a strong lens, held in the left hand (or without this if the operator has very good eyesight), the patient being seated in a reclining chair, facing a good light, the needle is entered, as near as possible, into the hair follicle; after this has been accomplished, and not till then, the patient is told to bring the sponge (positive) electrode in contact with the palm of the hand. The needle is not withdrawn until a slight frothing is observed around the stem, showing that the electrolytic action has been fully developed; but to avoid shock the sponge-electrode is first released by the patient, the needle being removed subsequently, this order being exactly the reverse of the initial steps.

The hair should always be left *in situ*, and not extracted before the needle is introduced, as it is a guide for the introduction of the latter, the instrument being passed in alongside of it. Besides this, it is an immediate guarantee of the success of the operation; for if the hair comes away with the very gentlest traction of the depilating forceps, a point always to be tested, at once we know that the papilla has been destroyed; but if force is required for its extraction, it is a sign that the follicle has not been properly entered. In this case the needle is reintroduced, or, better, it is not removed at all, repeated attempts being made from time to time to withdraw the hair until finally it is loosened. Eight cells of a freshly-charged galvanic battery will usually suffice. A greater or less number, however, may be required in

one case or another. The operation is a painful one, and but few hairs can usually be removed at a sitting.

The needle should be as fine as can be procured, even finer than a No. 13 cambric, if such is procurable. An expert mechanic can grind an ordinary needle down to the finest diameter. Some operators prefer an irido-platinum needle; others a watch-maker's very fine steel wire. It must be remembered that the larger the needle the longer it must be retained *in situ*, and the stronger the battery power the more rapidly and thoroughly can the hairs be removed. But if either of these conditions overstep the proper limits, abscess and scars are apt to follow, and much unnecessary pain is caused.

In any case, thirty or forty per cent. of the hairs remain (or appear to remain, for the growth of neighboring fine hairs seems to be stimulated by the use of the electricity), and the operation must almost always be repeated once, or several times. Some expert operators claim a return of only five to ten per cent. of hairs operated upon, but for the majority of operators the percentage above stated will be found safer to reckon upon.

When the operation is carefully performed not much scarring results, and most ladies who suffer from the growth of a moustache or beard would prefer the scars.

Hypertrichosis. (See *Hair, Diseases of.*)

Hypertrophy of the Hair. (See *Hair, Diseases of.*)

Hypertrophy of the Nail. (See *Nail, Diseases of.*)

Hypertrophy of the Skin. (See *Callositas, Chloasma, Clavus, Cornu cutaneum, Dermatolysis, Elephantiasis, Ichthyosis, Keratosis pilaris, Lentigo, Molluscum epitheliale, Morphæa, Nævus pigmentosus, Scleroderma, Sclerema neonatorum, Verruca.*)

Ichthyosis. Ichthyosis is a congenital, chronic, hypertrophic disease, usually occupying the whole surface, characterized by dryness, harshness or scaliness of the skin, and a variable amount of papillary growth. Two varieties are generally described, I. simplex and I. hystrix. I think the latter a distinct affection, and have described it below: I am now understood

to speak only of ichthyosis simplex. The disease may be so mild in form as to amount to little more than a certain dryness and roughness of the skin. It may, on the other hand, be quite severe. As ordinarily met with, ichthyosis consists of an altered state of the skin, characterized by a harsh, dry condition of the whole surface, accompanied by the production of scales, sometimes fine and branny; at other times coarser, and shaped after the lines and furrows of the skin. The latter, from their resemblance to fish scales, have given occasion to the name of the disease, "ichthyosis," or the "fish-skin" disease. The amount of scales depends upon the age of the patient, the severity of the disease, and the efficiency of any treatment which may have been employed. The scales, if not removed by bathing, often tend to accumulate. They are usually whitish, grayish or yellowish in color, with sometimes a glistening look. Sometimes the general color of the eruption is of a more or less yellowish or dark olive green. Even when the disease is not severe, it gives the surface an unwashed look.

The localities in which ichthyosis is developed to the most marked degree are the lower extremities, from the hips to the ankles, and the arms and forearms. The skin of the backs of the hands and the face very often has a peculiar, smooth, drawn, parchment-like appearance, which is very characteristic. Sensible perspiration is, in most cases, absent, excepting in the face, axillæ, palms and soles. There is sometimes marked hyperidrosis in the two last. The disease is worse in winter than in summer; in fact, it is apt to almost disappear during the latter season. The course of the disease is essentially chronic. Beginning to show itself distinctly during early childhood, it grows more and more marked with each year of the patient's life. It sometimes appears to be hereditary, but no distinct and invariable hereditary influence seems to prevail in all cases. Ichthyotic parents usually beget healthy children. The patient himself generally enjoys fair or good health. The disease occurs in all races, both sexes, and in every grade of society.

The diagnosis of ichthyosis is usually not difficult. The history

alone differs from that of all other skin diseases, its chronicity offering a marked contrast to the rapidly developing character of the acute inflammatory disorders.

External treatment alone is of any avail in ichthyosis. No medicine as yet brought forward has influenced the condition of the skin in this disease. Therefore, time, money, and the patient's stomach, will be saved, if arsenic, cod-liver oil, and what not, be discarded from the beginning. The skin is to be kept moist and supple by the frequent administration of warm baths with alkalies or soap. Vapor baths are also useful. Inunctions of some emollient material should always be practiced after the bath. In well-marked and severe cases, the soap treatment will be found valuable, to remove some of the dry and horny epidermis, and prepare the way for the application of emollients. A sufficient quantity of *sapo viridis* is to be rubbed into the skin twice, daily, for four or six days, during which period the patient is to refrain from bathing. A bath is first to be taken, four or five days after the last rubbing, when, in fact, the epidermis has begun to peel off; afterwards, inunction with a simple ointment is to be practiced, in order to prevent fissuring of the new skin. For this purpose, oil of sweet almonds, glycerine, pure or diluted, with one to seven parts of water, or one of the following ointments may be used:—

- | | | | |
|----|----------------------------|-------|----|
| R. | Adipis benzoat., | ℥ iv | |
| | Ung. petrolii, | ℥ j | |
| | Glycerinæ, | ℥ iv. | M. |
- Or, .
- | | | | |
|----|--------------------------------|------|----|
| R. | Potassii iodidi, | ℥ j | |
| | Ol. pedis bubuli, | | |
| | Adipis, aa | ℥ ss | |
| | Glycerinæ, | ℥ j. | M. |

I have used the latter formula with satisfaction in a number of cases, while I must confess ignorance as to the part played by the iodide of potassium.

Sulphur has recently been very highly extolled as a remedy in ichthyosis. I have not, as yet, had any opportunity to test its merits. It has been employed in the form of ointment in the

strength of half a drachm to a drachm to the ounce, and more recently by impregnating the underclothing with sulphur, hanging it in a box and vaporizing flowers of sulphur on a hot—not too hot—plate. The clothing should be reimpregnated every five or six days.

Ichthyol has also been used with success.

The prognosis of ichthyosis is entirely unfavorable as regards permanent cure, but alleviation of the symptoms may be brought about very satisfactorily. The affection should really be regarded as a deformity rather than a disease, though it predisposes strongly to the occurrence of eczema, particularly of the hands.

Ichthyosis Hystrix is characterized by the formation of irregularly shaped and sized, ill-defined, rough, harsh, yellowish, brownish or greenish patches, made up of enormously hypertrophied, more or less horny papillæ. Unlike the ordinary form of ichthyosis, this is apt to be localized, and rarely covers the surface to any extent. It is sometimes distributed in the line of the nerves. Sometimes the papillæ are so hypertrophied as to stand out like porcupine quills—hence the name “hystrix.”

The treatment of ichthyosis hystrix is essentially that of any warty or horny, non-malignant growth. The patch, if not too large, may be poulticed until softened, and then attacked by caustic potassa, or glacial acetic or chromic acid; or it may be removed by the knife. In one case considerable improvement was gained by painting the surface, twice daily, with the following:—

R.	Acidi salicylici,	3 ss	
	Ext. cannabis ind.,	gr. x	
	Collodii,	3j.	M.

The salicylic rubber plasters made by Johnson & Johnson would probably prove useful in these cases.

Another preparation which has been used with good effect is the fluid extract of *Thuja occidentalis*, painted on in the same way.

Impetigo (*im'-pĕ-tĭ'-gō*) is an acute inflammatory disease, characterized by the appearance of one or more pea- to finger-

nail-sized, discrete, rounded and elevated, firm pustules, unattended, as a rule, by itching. The eruption is occasionally, but not often, attended by slight constitutional symptoms, as loss of appetite, constipation and malaise. The pustules come out one or two at a time, and are discrete and scattered, never tending to coalesce. They are tense, raised, semi-globular, of a whitish-yellow color, and at first surrounded by an areola, but with little infiltration. In number they may vary from one to a dozen, or more. They may occur upon any part of the body, but are common upon the face, hands, feet, toes and lower extremities; also, upon the palms and soles. Commonly they itch or burn little or not at all. The disease may last several weeks, the lesions coming out rapidly one after another at first, lasting a day or two in a typical condition, and then becoming darker or bloody, drying, crusting and becoming absorbed. The fluid contents of the pustules, where these are ruptured by accident or design, are seen to be thinner than would appear from the firm aspect of the unruptured pustule. The crusts may be abundant, and of a yellowish or brownish color, or they may be insignificant, the pustule being absorbed. In no case does a permanent scar remain. The disease tends to a speedy recovery. Relapses are not common.

Impetigo occurs in healthy, well-nourished people. Its exact etiology has not been ascertained, but it is not connected with debility, want of proper nourishment, or derangement of the digestive system. In adults it occurs about the fingers and hands, but it is not so common among grown-up people as among children. It is not contagious.

Impetigo is to be distinguished from eczema, impetigo contagiosa, and ecthyma. From eczema it is distinguished by the superior size and development of the pustules, their small number and separate arrangement. In addition, the pustules of impetigo do not incline to rupture, and there is rarely a crusted discharge. The opposite in all these respects is found to occur in eczema. In addition, eczema is invariably accompanied by infiltration and by itching, neither of which are present in impetigo. In

impetigo contagiosa, which must not be looked upon as a variety of impetigo, but as a distinct disease, the affection begins by a vesicle or vesico-pustule like that of vaccinia; the crust is flat, sometimes umbilicated, without any infiltration about its base; and above all, there is a history of contagion. None of these characters are found in impetigo. Impetigo is often confounded with ecthyma, but in the latter affection the pustules are flat, and are surrounded by an extensive, inflammatory, hard base; in impetigo they are elevated and rounded, and have generally but a slight areola. In ecthyma the crusts are blackish or brownish in color, are large and flat, and are seated on a deep excoriation. Impetigo usually occurs in the strong and healthy; ecthyma in the weakly and cachectic.

DIFFERENTIAL DIAGNOSIS

BETWEEN

IMPETIGO.

1. Pustules large and prominent.
2. Pustules discrete.
3. Pustules not numerous.
4. Pustules do not rupture.
5. Skin but little thickened.
6. Itching moderate.
7. But little, if any, discharge.
8. Speedy recovery.

PUSTULAR ECZEMA.

1. Pustules small and not greatly elevated.
2. Pustules confluent.
3. Pustules present in large numbers.
4. Pustules rupture.
5. Skin infiltrated.
6. Severe pruritus.
7. Secretion abundant.
8. Lesions remain for some time.

IMPETIGO.

1. Pustules elevated and rounded.
2. Base not infiltrated.
3. But slight areola.
4. Scales yellowish and small.
5. Scales separate in a few days.

ECTHYMA.

1. Lesions flat or oval.
2. Base infiltrated.
3. Marked areola.
4. Scales large, black and flat.
5. Scales separate in two or three weeks.

IMPETIGO.

6. No pigmentation.
7. Slight excoriation.
8. General health good.

ECTHYMA.

6. Some pigmentation.
7. Deep excoriation.
8. General health poor.

IMPETIGO.

1. Not communicable.
2. Begin as pustules.
3. Lesions deep.
4. Pustules elevated and rounded.

IMPETIGO CONTAGIOSA.

1. Contagious affection.
2. Begin as vesicles.
3. Lesions superficial.
4. Pustules flat or umbilicated.

The treatment of impetigo is simple. The pustules may be opened as they mature, and the contents allowed to escape. The part should be protected from rubbing and violence. The lesions may be dressed with the following ointment:—

R. Bismuthi subnitrat., $\frac{3}{4}$ ss-j
 Ung. aquæ rosæ, $\frac{3}{4}$ j. M.

This ointment is to be spread thickly on bits of cloth, applied to the lesions and covered with waxed paper. It is then to be bandaged on to the parts, and retained in apposition with occasional renewals, until the lesions have healed up under the crust.

Internal treatment is not required.

Impetigo Contagiosa is an acute, inflammatory, contagious disease, characterized by the formation of one or more superficial, discrete, roundish or ovalish, vesico-pustules or blebs, the size of a split pea or finger nail, which pass into crusts. The eruption is commoner among infants and young children. Isolated, flat, or slightly raised vesicles are first seen, small in size at the beginning, but rapidly spreading on the periphery until they become like little blebs, with a thin, withered-looking, collapsed wall. The lesions are few in number. Usually they are discrete, but sometimes two or more coalesce. They are most commonly found about the mouth, on the chin and nose, and on the hands. Crusts form in a few days, usually yellowish or straw-colored, and, as they dry, loosen at the edges, so as often to look as if they had been stuck on the skin. The surface

beneath is moist and excoriated. The mucous membranes of the mouth and conjunctiva are occasionally invaded. The disease may extend from place to place by auto-inoculation. It runs its course in about ten days, tending to a spontaneous recovery. Sometimes, however, it runs an anomalous course.

Impetigo contagiosa rarely occurs among adults; its attacks are almost exclusively confined to children. The disease is contagious and auto-inoculable. It appears sometimes to occur in the form of an epidemic, and is commoner in summer. The affection has been supposed to be due to a vegetable fungus, but thus far the evidence of observers has been uncertain and conflicting. Stelwagon, whose opportunities of observation of the disease have been greater than those of any previous writer on the subject, does not consider the disease to be due to a parasite, nor related in any way to vaccination. He believes it to be an acute, contagious, systemic disease (exanthem), with cutaneous manifestations, having a definite course, and, in all probability, due to a specific poison.

Impetigo contagiosa is to be distinguished from eczema pustulosum, from impetigo and from scabies. As to the first three see under their respective heads. As to scabies, see the following table:—

DIFFERENTIAL DIAGNOSIS

BETWEEN

IMPETIGO CONTAGIOSA.	SCABIES.
1. Non-parasitic disease.	1. Presence of parasite.
2. Pustules occur alone.	2. Presence of pustules, papules and vesicles.
3. Pustules mostly large.	3. Most of the lesions small.
4. Pustules not very numerous.	4. Lesions present in large numbers.
5. No tendency to group.	5. Lesions usually occur in groups.
6. Eruption lasts for a few days.	6. Disease lasts for weeks and months.
7. Little or no itching.	7. Intense itching.
8. No burrows in the skin.	8. Presence of burrows.

IMPETIGO CONTAGIOSA.

- 9. Lesions not multiform.
- 10. Lesions usually preceded by fever.
- 11. Usually appears first on face.

SCABIES.

- 9. Multiformity of lesions.
- 10. No constitutional disturbance.
- 11. Usually seen first on hands or body.

From varicella, pemphigus and herpes iris, the appearance and distribution of the lesions will distinguish the affection.

The treatment of impetigo contagiosa is simple. An ointment of ten grains of ammoniated mercury to the ounce is as good a dressing for the lesions as is necessary, and this, with cleanliness, will suffice for a rapid cure.

Impetigo Herpetiformis. (See *Dermatitis herpetiformis*.)

Infantile Syphilis. (See *Skin Diseases in hereditary syphilis*.)

Intertrigo. (See *Erythema intertrigo*.)

Iodine Eruptions. (See *Dermatitis medicamentosa*.)

Itch—Army Itch. (See *Scabies*.)

Itch—Michigan, Prairie, etc. (See *Pruritus hiemalis*, *Scabies*, *Eczema* and *Urticaria*.)

Keloid. Keloid is a connective-tissue new growth, characterized by one or more irregularly-shaped, variously-sized, elevated, smooth, firm, somewhat elastic, pale-red, cicatriciform lesions.

The disease usually begins as a small, pea-sized nodule, increases slowly in size and commonly assumes an ovalish, elongated or crab-shaped form, or may occur in streaks or lines. The lesion varies greatly in shape, and may be quite small or as large as the palm. The outline is well defined, and the surface contour rounded and highest in the centre. Taken between the fingers it has a firm, dense, slightly elastic feel. Its surface is smooth, shining and generally devoid of hair, and its color reddish or pinkish. The lesion is usually single, though several may exist simultaneously. It is more common over the sternum, but it is also met with on the mammæ, neck, ears, arms and elsewhere. It is sometimes painful, especially on pressure, and occasionally, but rarely, it itches. Now and then, acute inflammatory symptoms may arise in a keloidal tumor, giving it a

malignant appearance. These usually disappear in turn spontaneously. The course of the disease may be rapid or slow; having attained a certain growth it is apt to be stationary, and may remain a lifetime, though in most cases it ultimately disappears spontaneously.

Keloid, it is said, may arise spontaneously. It usually, however, springs up at the site of various injuries of the skin, when it is called cicatricial keloid. This variety is often met with as the result of burns by fire or chemicals, cuts, flogging and wounds of all kinds. It is sometimes found in the lobe of the ear after piercing for ear-rings, in the scars of leech bites, or of acne lesions, and I have seen it abundantly developed in the scars of non-parasitic sycosis and of syphilis. I think that in these last instances the keloid lesions tend to disappear rather more rapidly than in other forms. Keloid is commoner in the colored race. No cause can be ascribed for the "spontaneous" form of keloid, and I do not believe such a variety exists; each lesion of keloid grows in some previously existing scar, which, however, may have been so minute as to have escaped notice.

Keloid is a connective-tissue new growth. Under the microscope the lesions are seen to be made up of a dense, fibrous mass of tissue, whitish in color and composed of compact bundles of connective tissue, having their seat in the corium.

The symptoms of keloid are so striking that no difficulty need be experienced in making a diagnosis. It is most liable to be mistaken for simple cicatrix, from which it may be distinguished by its color, outline, elevation and consistence, and, frequently, by the presence of pain.

The treatment of keloid is rarely satisfactory. When operated upon by the knife or caustic it is apt to return, and frequently in an aggravated form. Caustic potassa is the best caustic to use, but the growth should never be touched while it is still making progress, or certain disappointment will be the result. Two forms of treatment have recently been recommended as successful. One of these consists in repeated scarifications, such as are described under lupus vulgaris. These must be persevered in, as at first the keloid surely returns. After a while, however, it is



PLATE VII. MACHIAIR OR AN ESTHETIC TUBEROSE.

THE MACHIAIR OR AN ESTHETIC TUBEROSE.

said to disappear. Hardaway has used multiple puncture with the electrolytic needle with success. (See *Electricity in the treatment of Skin Diseases*.) Hypodermic injections of morphia are occasionally required to allay the pain. Chloroform and anodyne liniments may also be prescribed for the same purpose, and I have used the fluid extract of hamamelis with benefit. Wilson recommends painting the growth with a solution containing one drachm of iodide of potassium, an ounce of soft soap and an equal quantity of alcohol; followed by the application of lead plaster spread on a piece of soft leather, the dressing being kept on a week and then replaced by another.

The prognosis of keloid is not very favorable as to disappearance. The utmost that can be said in any given case is that it *may* disappear either spontaneously or under the use of supposed remedies after a time. Perhaps scarification and electrolysis may be more successful, though their use is too recent to justify any positive assertion. Its course is usually progressive, with occasional temporary arrest of development. Very often, however, the lesions remain stationary for years.

Keloid of Addison. (See *Morphæa*.)

Keratosis Pigmentosa. (See *Verruca senilis*.)

Keratosis Pilaris is somewhat akin to ichthyosis. It is characterized by the formation of pin-head-sized, conical, whitish, epidermic elevations, seated about the apertures of the hair follicles, chiefly those of the outer aspect of the thighs and of the arms near the shoulders. It looks not unlike "goose flesh." The treatment is in general the same as that of ichthyosis, but the prognosis is more favorable. Daily rubbings with *sapo viridis*, followed by an emollient ointment, are usually useful. And sulphur ointment, half a drachm to a drachm to the ounce, may be employed with good effect.

Lentigo, or freckles, though a common affection, is so unimportant as to demand only a passing notice. Their ordinary seat is upon the face, but they may occur in any part of the body. They are rarely seen before the third year, and tend to disappear spontaneously in older persons. Freckles of an intense dark-brownish or blackish color are met with as one of the symp-

toms in the rare disease known as "xeroderma of Hebra." (See *Angioma pigmentosum et atrophicum*.) The remedies employed in lentigo are the same as those used in chloasma. (See *Chloasma*.)

Lepra. Lepra, or leprosy, is an endemic, chronic, malignant, constitutional disease, characterized by alterations in the cutaneous, nerve and bone structures, resulting in anæsthesia, ulceration, necrosis, general atrophy and deformity. It is a constitutional disease and involves the whole organism most profoundly. Its invasion is slow and insidious. Premonitory symptoms of malaise, mental depression, languor, sleepiness, loss of appetite, nausea, chills, repeated attacks of fever, general debility, nervous prostration and pains in the bones are usually present and may last for weeks, months or years, without other symptoms. Sooner or later, however, the more characteristic features of the disease, the bullous, macular, pigmentary or tubercular skin lesions, make their appearance. These may appear separately, successively or together. Sometimes the skin lesions are prominent symptoms of the disease; at other times they are subordinate. Other organs of the body, as the nerves, are also affected.

Two forms of leprosy are recognized, the tubercular and the anæsthetic. No absolute line, however, separates them; they often appear simultaneously upon different parts of the body, and one may pass into the other. The tubercular variety is characterized by the formation of masses of infiltration and tubercles. Other lesions are also found. An eruption of pemphigus-like blebs, showing themselves irregularly for some time before the appearance of other lesions, is one of the earliest symptoms. It is said that these more frequently precede the macular variety of leprosy than the tubercular. Macules now make their appearance as smooth, shining, erythematous patches, sharply defined, infiltrated, not commonly raised above the level of the skin, yellowish or reddish in color, and growing dusky yellow and brownish, as they grow older. Sometimes they are paler, and look like a piece of cut raw bacon set into the skin.



TUBERCULAR LEPROSY—ULCERS ON THE HANDS.



TUBERCULAR LEPROSY—LATE STAGE WITH ULCERATION.

They are commonly surrounded by a pinkish or lilac border of small blood vessels. The sensibility of the skin is altered from the beginning, the patches being at first hyperæsthetic, and later anæsthetic. They may appear anywhere on the body, but most commonly upon the trunk and extensor surfaces of the extremities. Sometimes they are present in such numbers as to involve a considerable area of the body. They may disappear and reappear from time to time, or they may remain as permanent lesions, in which case they increase in size.*

Sooner or later the disease shows itself in the form of variously-shaped and sized nodules and tubercles, situated in the skin and subcutaneous tissues, which may develop into roundish, irregularly-shaped prominences and elevated masses, from cherry to walnut size, or larger, conspicuous and prominent, or slightly raised, and having a yellowish, brownish or bronze color. They are more or less painful when pressed upon. They are usually found upon the face; and chiefly the forehead, eyebrows, cheeks, nose, lips, chin and ears are apt to be invaded, giving rise to deformity, often of a hideous character. Later, the mucous membrane of the mouth, pharynx, epiglottis, larynx and nares are attacked; the eye also suffers. Besides the face, other portions of the body, notably the trunk, buttocks, arms and legs, fingers and toes, are invaded. The course of the tubercle varies; it may last a long time without change, or it may soften or ulcerate at once, or it may be absorbed. Ulceration is apt to occur about the fingers and toes, the ulcers being covered with adherent brownish crusts.

The anæsthetic variety of leprosy may occur in conjunction with the tubercular variety, or alone, in which case it is characterized by the presence of a number of symptoms in addition to the anæsthesia. Blebs are apt to appear, first coming out in an

* The plates representing macular and tubercular leprosy, here given, are from Norwegian cases, and have been reproduced from the *Monatshefte f. Prakt. Dermatologie*, although they appear on a larger scale in Leloir's recent monograph.

irregular manner, from time to time, and being followed by pigmentation, and, after a longer or shorter time, by anæsthesia about the seats of the former lesions. In other cases, macules, like those which sometimes precede the tubercular form, come first. Hyperæsthesia of the skin sometimes occurs, with pains and burning sensations, followed by anæsthesia affecting a limited portion or the greater part of the surface. Later, the skin becomes atrophic, dry, yellowish or brownish in color, and more or less wrinkled.

Following this alteration in the structure of the skin, the subcutaneous tissues and muscles undergo atrophy, giving rise to deformity, especially of the fingers and toes; the hairs and nails become altered in structure or are shed; the hands and feet become greatly mutilated; the fingers and toes bent, crooked and contracted. Sooner or later the bones are attacked, causing destruction of the joints and of the bones themselves; the skin over the joints becomes excoriated and ulcerated; the ends of the bones undergo disintegration, and the phalanges, finally, either become absorbed or drop off. Even the hands and feet may gradually be lost; the extremities become more or less completely anæsthetic, and are greatly wasted, at times, to half their former size.

The disease does not usually give rise to much pain or suffering. Death occurs more commonly after some years, by diarrhœa or exhaustion.

The causes of leprosy still remain obscure. It is endemic in Africa, along the shores of the Mediterranean, and of the Atlantic and Indian Oceans, as well as in the interior of the country; also in Asia Minor, Arabia, Persia, India, China, Japan, Kamtschatka, the various islands of the Pacific Ocean and Australia. In Europe, it is found in Norway, Southern Spain, Sicily, Greece and Southern Russia. Upon the Western Hemisphere, it occurs in Mexico, Central America, the Islands of the West Indies, along the coast of South America, and especially in Brazil; it also exists in Iceland. There are old centres of the disease in Tracadie, N. B., in South Carolina and in Louisiana. Norwe-

gian emigrants have introduced it into Minnesota, but it has not spread, nor have the Chinese lepers in San Francisco and elsewhere conveyed this disease to natives. Within the past few years, cases of undoubted authenticity have been reported as occurring among natives of the United States who have never been out of the country, nor come in contact with lepers.

Leprosy seems in many instances hereditary, and may be conveyed from parent to child through a series of generations. Concerning its contagiousness opinions differ. The weight of testimony seems in favor of its contagious nature.* The discovery of the bacillus lepræ places beyond doubt, I think, the contagious nature of leprosy from a purely theoretical and scientific point of view. Practically, however, we know so little of the circumstances favoring the growth, propagation and transmission of this bacillus, and the clinical evidence is so contradictory that we cannot class the affection with the contagious exanthemata or with syphilis as regards the practical danger of transmission. The most potent causes favoring the spread of the disease appear to be connected with climate, state of the soil, food and habits of the people. The disease usually occurs among the lowest classes, but it may attack those in the most favored circumstances. It occurs in both sexes, and at any period of life.

The diagnosis of leprosy, in countries where the disease is endemic, is usually easily made. The earliest premonitory symptoms arouse suspicion, which the appearance of the cutaneous manifestations places beyond doubt. When the disease occurs sporadically, in countries where it is not endemic, it may, however, be mistaken for other affections.

The macular and tubercular varieties are apt to be mistaken for syphilis. The lesions of leprosy, however, are larger and more irregular in size and distribution. The pigmentation of

* The admirable monograph of Dr. J. C. White, of Boston, "The Question of Contagion in Leprosy," Am. Dermatological Association, 1882, contains the most convincing clinical arguments yet brought forward in favor of the contagiousness of leprosy.

leprosy is of a peculiar yellowish or brownish tint. The lesions have a smooth, glazed appearance. The tubercles are apt to be much larger than those of syphilis, being often hazel-nut- or walnut-sized, and are darker in color; their course is usually slower than that of syphilitic tubercles. The general expression of the face (the usual seat of the tubercles in leprosy), is much changed, the features having an ugly, leonine appearance. (See plates.)

Later, when the tubercles break down into ulcers, the blackish, adherent crusts which cover them are seen to be less bulky than those observed in syphilis. With ulceration come other very marked features of the disease, as anæsthesia, distortion of the hands and feet, absorption of bone tissue, and atrophy, all unmistakably characteristic.

The yellowish, roundish patches of macular leprosy should not be mistaken for vitiligo, although this may readily occur in the early stages of the disease. The health in vitiligo is generally good, and the decolorized patch of disease consists of simple absence of pigment, with usually a border of increased amount of coloring matter. The skin is normal in texture. In leprosy, on the other hand, the macules are infiltrated with a lardaceous-looking substance, of firm consistence, and are generally anæsthetic or hyperæsthetic.

Morphœa, which is an affection of an entirely different nature (see *Morphœa*), presents lardaceous-looking patches, somewhat resembling those of macular leprosy. But the general health in morphœa is good, and the patches show normal sensibility, and tend to spontaneous recovery.

The treatment of leprosy has thus far proved very unsatisfactory. As in the case of most diseases refractory to treatment, the remedies and pretended cures have been exceedingly numerous, but as they have failed for the most part, they need not be mentioned here. The remedies now employed are valuable in improving the general condition of the leper. Change of climate and residence, usually to a temperate and bracing atmosphere, is imperative. Strict hygienic rules should be adopted,

including exercise and bathing, with the most nourishing food. Quinine and strychnia are important as tonics, and the usual alteratives may also be employed. Symptoms are to be treated as they arise.

Local treatment is valuable. Baths, plain or medicated with iron or sulphur are said to be of service. Of recent remedies, ichthyol, the oil of cashew nut, gurjun oil and chaulmoogra oil, internally and in the form of inunctions, are recommended, on good authority. The formula for the use of gurjun oil is as follows:—

R. Ol. gurjun, $\frac{3}{4}$ j
 Aquæ calcis, $\frac{3}{4}$ iij. M.

Churn well together, to make a cream. Apply to ulcers,

Cashew nut oil is applied, pure or diluted with almond oil, to the anæsthetic patches, being rubbed in until it nearly blisters. I think one part of the cashew-nut oil to three of the almond oil is strong enough to begin with, and as much friction, short of actual blistering or abrasion of the skin, should be used, as the patient can bear. The oil of cashew nut should also be applied, pure, to the tubercles until they open, and then the sores may be dressed with gurjun oil, as above. Antiseptic dressings with extreme cleanliness should be practiced:

The prognosis of leprosy is unfavorable. A few cases of cure have been reported, when the patient has been placed upon energetic treatment from the earliest appearance of the disease. In the anæsthetic form of the disease the prognosis is more favorable.

Leprosy. (See *Lepra*.)

Leucoderma. (Congenital, see *Albinism*; acquired, see *Vitiligo*.)

Lice. (See *Pediculosis*.)

Lichen Pilaris. (See *Keratosis pilaris*.)

Lichen Planus. (See *Lichen ruber*.)

Lichen ruber (*li-kên*). Lichen ruber is an inflammatory disease, characterized by pin-head or pea-sized, flat and angular, or acuminate, smooth and shining, or scaly, deep red, discrete or

confluent, papules, running a chronic course, and attended by more or less itching.

The acuminate form is rare. The angular form, *lichen ruber planus*, is that commonly met with, the papules varying in size from a pin head to a split pea; often they coalesce and form patches. The shape of the papules is peculiar and characteristic; they are seldom round, as most papules, but are, instead, quadrangular or polygonal in form. They rise abruptly from the skin to the sixteenth of an inch or less, are flattened on the summit, and show a minute umbilication with whitish puncta. To the touch, they are firm, smooth, and without scales, excepting in those cases where the disease runs into a papulo-squamous stage. They are glazed, and of a peculiar dusky, crimson, or even violaceous tint. Usually discrete, the lesions are sometimes aggregated, so as to form sheets of raised and infiltrated lesions.

The diffused form of the disease is rarely seen in this country. It is made up of large patches of acuminate lesions. Itching is generally present in both varieties of the disease. It is usually moderate, but may at times be severe. The commonest locality of lichen ruber planus is on the forearms, especially upon the flexor surfaces of the wrists. It occurs also on the palms and soles, and on the penis. It is apt to be symmetrical, and the lesions are sometimes arranged in rows. The course of the disease varies; in some cases, under careful treatment, a cure can be effected in a few weeks or months, while other cases run an exceedingly chronic course, even extending to years. Persistent, dark brown or violaceous stains succeed the lesions. The severer forms are said to run a graver course, and to end sometimes in marasmus and death.

The cause of lichen ruber is generally to be found in exhaustion, nervous debility and depression, overwork and improper diet, leading to impoverished nutrition.

Lichen ruber may be mistaken for the papular syphiloderm, which it closely resembles, especially in the coppery or ham color of the lesions. In the variety *L. ruber planus*, however, the peculiar shape and contour of the lesions, with their smooth,

umbilicated or punctate surfaces, will serve to distinguish them. Eczema papulosum, which often resembles lichen ruber, differs, in that the papules are roundish, somewhat acuminate, bright red in color, and intensely itchy. Their evolution also is different.

The internal treatment of lichen ruber should be chiefly tonic and supporting. Arsenic is of high value, and is, in fact, almost a specific. The dose at first, two to four minims of Fowler's solution, in a fluid drachm of wine of iron, should be increased almost to the limit of tolerance, and persisted in. Arsenic may also be administered hypodermically, using one part of Fowler's solution and five parts of water, beginning with four or five minims of the mixture. The preparations of iron and cod-liver oil are also useful. Treatment should be instituted early in the course of the disease. Cases of long standing are very stubborn, even to the best directed treatment, which, earlier given, might have proved effectual.

Locally, simple ointments, as vaseline or cold cream, may be employed when itching is not present. When the eruption itches, alkaline baths, carbolic acid washes or ointment, dilute hydrocyanic acid, with water, diluted "liquor picis alkalinus," made thus—

R. Potassæ caustic, gr. xv
Picis liquidæ, gr. xxx
Aquæ, f℥iv. M.

may be employed.

The following ointment is a useful one:—

R. Olei rusci crudi (vel. ol. betulæ), ℥j
Ung. aquæ rosæ, ℥j
Ol. rosæ, ℥xx. M.

In addition to these the more stimulating and stronger anti-pruritic remedies mentioned under the head of eczema may be employed, with the hope of reducing the pruritus and bringing about absorption of the lesions. The following ointment has proved of high value in *L. ruber planus*:—

R. Hydrarg. bichlor., gr. ij-iv
Acidi carbolic, gr. x-xx
Ung. zinci oxidi, ℥j. M.

The prognosis of lichen ruber will depend upon the extent of the eruption, its duration, and the patient's general condition. Localized eruptions of *L. ruber planus* on the wrists and forearms, occurring in persons of average health, do not usually require a very lengthened course of treatment for their cure. When, however, the eruption is extensive and severe, and has lasted a long while, the prognosis is much less favorable.

Lichen Scrofulosus is a very rare disease in this country. I am not sure that any case has been reported. It is characterized by the appearance of pin-head-sized papular lesions, of a reddish color, and tending to form in groups over the chest, back and abdomen. It resembles papular eczema, but does not itch. It is said to occur in scrofulous young persons about the age of puberty. The disease always yields to treatment. Cod-liver oil, internally and externally, cures it.

✱ **Lichen Simplex** was the name formerly given to papular eczema. (See *Eczema*.)

Lichen Tropicus. (See *Miliaria*.)

Lineæ Albicantes. (See "*Striæ et maculæ atrophicæ*," under the head of *Atrophy of the Skin*.)

Lip, Fissured. (See *Eczema of Lip*.)

Liver Spots are either discolorations of the skin (see *Chloasma*, *Lentigo*), or are due to a local parasitic disease (see *Tinea versicolor*).

Louse. (See *Pediculosis*.) Body l., *P. vestimentorum*. Head l., *P. capiti*. Crab l., *P. pubis*.

Lupus Erythematosus. Lupus erythematosus is a cellular new growth, clinically resembling an inflammatory disease but apt to result in superficial scarring, characterized by one or more circumscribed, roundish or irregularly-shaped, variously-sized, reddish patches, covered with grayish or yellowish, adherent scales, or by the occurrence of erythematous or telangiectatic lesions. The disease usually begins in the form of one or more roundish, pin-head to small pea-sized, erythematous patches, which enlarge upon their periphery, and often coalesce to form larger, irregularly-shaped patches. After a time the patches increase in thick-

ness, and show more infiltration, and when fully developed there may be a number of patches, varying in size from a split pea to a silver dollar, or the palm of the hand, having usually a distinct and clear cut marginal outline. In color they are reddish or violaceous, and are sometimes covered with fine or coarse, grayish or yellowish, remarkably adherent scales, at times scanty, at other times forming sebaceous-looking crusts, like those found in seborrhœa of the face. They are firmly attached to the openings of the sebaceous glands, which are often plugged up with sebum, or denuded and patulous. In other cases the eruption does not seem to involve the sebaceous glands in particular, but seems purely erythema-like in form and appearance. The patch spreads on its margin, which is usually higher than the centre, the latter being commonly paler, and often showing atrophic depression. After a variable time the patch attains a certain size, and may remain stationary. There is never any moisture or discharge in connection with the disease. Sometimes it seems to spread by the occurrence from time to time of erysipelas-like attacks, after the cessation of which the area of permanent disease will be seen to have increased and new circles to have formed.

Lupus erythematosus is usually found upon the face, one or both cheeks, below the eyes, and the bridge of the nose, being the commonest seat of the affection. Often both of these localities are attacked by the disease, which forms the rude figure of a butterfly with outstretched wings. The muco-cutaneous and mucous surface of the lips, the ears, scalp, back, and other parts of the body may be attacked. Lupus erythematosus is remarkable for its chronicity, and may persist through life. It tends to increase, from time to time, by repeated attacks. Ultimately, the process generally ends in the formation of a superficial cicatricial tissue.

The subjective symptoms vary in different cases, depending somewhat upon the activity of the disease. At times there is much burning and itching, while in other cases there may be no subjective symptoms.

The causes are obscure, although it is apt to occur in persons

of a scrofulous tendency. Females are more liable to it than males, and light than dark-haired persons, and it occurs notably on those who are subject to disorders of the sebaceous glands, sometimes, indeed, appearing to originate in a patch of localized seborrhœa.

When fully developed, the typical patch of lupus erythematosus offers such a striking picture, with its reddish or violaceous color, its sharply circumscribed outline, its infiltrated surface, occasionally studded with plugged-up or gaping sebaceous openings and covered with adherent sebaceous scales, and its place of election, the nose and cheeks, that it can scarcely be mistaken for any other disease. It is to be distinguished from lupus vulgaris by the absence of papules, tubercles and ulceration. The sebaceous glands are not affected in lupus vulgaris. Lupus erythematosus rarely begins before puberty; lupus vulgaris usually begins in childhood. Lupus vulgaris is a deep-seated disease, and is attended, sooner or later, with ulceration and disfiguring cicatrices; lupus erythematosus is comparatively superficial. Psoriasis sometimes resembles lupus erythematosus very closely, but may be distinguished by its course and by the various symptoms peculiar to it. Syphilis sometimes resembles lupus erythematosus superficially, but its history is very different.

DIFFERENTIAL DIAGNOSIS

BETWEEN

LUPUS ERYTHEMATOSUS.

1. Does not usually appear until some time after puberty.
2. Initial lesion is erythema, which is comparatively superficial.
3. Orifices of sebaceous follicles, not infrequently gaping and distended with hardened sebium plugs.
4. Never ends in ulceration.

LUPUS VULGARIS.

1. Often appears in childhood, or about the period of puberty.
2. Isolated minute nodules, and peculiar currant-jelly-like deposits.
3. Sebaceous follicles, not especially involved.
4. Very commonly ulcerated in parts, at least in some stage of its course.

LUPUS ERYTHEMATOSUS.

1. If scales are present, they consist chiefly of epidermis, and the under surface sends little processes into the sebaceous follicles.
2. Skin beneath crusts is dry and dusky red or violet.
3. Sebaceous follicles are filled with hardened sebum plugs.
4. On disappearance, a cicatricial appearance of the skin is left.

LUPUS ERYTHEMATOSUS.

1. Often of many years' duration.
2. Oftenest met with on face, ears and head.
3. More or less symmetrical.
4. Color dusky red or violet.
5. Never the seat of ulceration.
6. Occurs in strumous subjects.
7. Very obstinate and little influenced by constitutional remedies.
8. Sebaceous follicles often patulous, and plugged with plugs of sebum, and scales very adherent.

SEBORRHOEA SICCA.

1. Crusts consist chiefly of sebaceous matter.
2. Skin beneath crusts is oily, but otherwise healthy or slightly reddened.
3. Sebaceous follicles are filled with soft, white, sebum plugs, which escape in great numbers on pressure.
4. Leaves no trace behind it.

LATE SYPHILODERMATA.

1. Chronic, but not nearly so markedly so.
2. Common on the face, though never assumes the butterfly form sometimes taken by L. erythematosus, and other parts frequently involved.
3. Generally non-symmetrical.
4. In the chronic stage brownish or coppery.
5. Ulceration common.
6. Occurs in syphilitic subjects, and other manifestations of syphilis may be present.
7. Easily removed by anti-syphilitic remedies, local and constitutional.
8. Sebaceous follicles not involved, and if scales are present, they are thin and not very adherent.

[MCCALL ANDERSON.]

The results of treatment in lupus erythematosus are extremely varied. In one case the therapeutic measures employed will prove rapidly and easily successful, while in another apparently



. 3 iiss
 aa . . . 3 ss
 3 j
 3 v. M.

stimulant application, relieving the
 used in mild cases. It may be
 the form of a plaster, or rubbed in
 half its weight of alcohol, it forms
 of even more value as an outward
 to be well scrubbed with the spirit,
 present are removed, when it may
 and some mild ointment applied.
 In some cases, prepared as a plaster,
 sulphur may sometimes prove ser-
 of an ointment, a drachm or more
 has been used with success in the
 to a drachm to the ounce. This,
 semi-caustic and its effects must be
 caustic applications are demanded
 never be used until the weaker ones
 caustic potassa, one part to three or
 of these. It may be applied by means
 of a brush. Fuming nitric acid may also
 be used with the potash.

Sometimes been used with success, as
 the spoon, but in cases demanding,
 such strong measures, the prac-
 tice is better than any of the caustics, or
 mentioned. This may be carried out
 with the tenotome, or the multiple scarifier
 holding it in the hand like a pen, and
 making incisions about one-sixteenth of an
 inch entirely through the skin. Having
 operated upon with a series of incisions
 a fresh series, perpendicular to the
 first, a third series may be practiced,

equally light case every known method of treatment may be exhausted without producing more than a temporary effect on the course of the disease. Bésnier says that nothing is more deceptive than the therapeutics of lupus erythematosus, even allowing for recent incontestible advances. Spontaneous cures, speedy success with the most simple and the most diverse methods, frequent relapses, often failure, even when recourse is had to the most active measures—this is what the practitioner has to expect in the treatment of lupus erythematosus. Internal remedies are called for in some cases. They are to be selected to meet the especial indications which may be manifested. Iodine, arsenic, iodide of potassium and cod-liver oil may, one or another, often be employed with advantage. Hygienic measures, chiefly nourishing diet, fresh air and sea bathing, are important.

The external treatment is that which will usually be found most available and of the greatest value. In the milder forms of the disease it is to be remembered that patches often disappear without leaving a scar. Care must be taken, therefore, not to make matters worse than they would naturally turn out. No strong caustics are to be used in such cases. Stimulating applications may be first tried. The following mild stimulant is useful when the patches are more erythema-like in appearance, recent, spreading and superficial, with little infiltration and no involvement of the sebaceous glands:—

R. Zinci sulphat.,
 Potassii sulphuret, aa $\frac{3}{4}$ ss
 Aquæ rosæ, f $\frac{3}{4}$ iiii ss
 Alcoholis, f $\frac{3}{4}$ iij. M.

If this is too strong, it may be diluted, but if it agrees, the first two ingredients may be increased in quantity to one drachm.

A somewhat stronger stimulant, but one useful in the form of lupus erythematosus just described, as well as in cases where there is more infiltration, is the following:—

R. Chrysarobin,	3 iiss	
Acidi salicylici,		
Pulv. calaminis, aa . . .	3 ss	
Ætheris,	3 j	
Collodii flexile,	3 v.	M.

Sapo viridis is also a good stimulant application, relieving the disease by itself alone, when used in mild cases. It may be applied spread upon cloth in the form of a plaster, or rubbed in with water. Dissolved in one-half its weight of alcohol, it forms the "spiritus saponis kalinus," of even more value as an outward application. The patches are to be well scrubbed with the spirit, until any scales that may be present are removed, when it may be washed off with water, and some mild ointment applied. Mercurial ointment is useful in some cases, prepared as a plaster, and applied continuously. Sulphur may sometimes prove serviceable applied in the form of an ointment, a drachm or more to the ounce. Pyrogallic acid has been used with success in the form of an ointment, a scruple to a drachm to the ounce. This, it must be remembered, is a semi-caustic and its effects must be watched. Stronger and even caustic applications are demanded in some cases, but they should never be used until the weaker ones have been tried. A solution of caustic potassa, one part to three or six of water, is one of the best of these. It may be applied by means of a charpie brush upon a stick. Fuming nitric acid may also be used; it is less painful than the potash.

The galvano-cautery has sometimes been used with success, as also has the curette or scraping spoon, but in cases demanding, from their extent and infiltration, such strong measures, the practice of linear scarification is better than any of the caustics, or other strong remedies just mentioned. This may be carried out by using a fine scalpel or tenotome, or the multiple scarifier (see under *L. Vulgaris*), holding it in the hand like a pen, and making a series of parallel incisions about one-sixteenth of an inch apart, and extending entirely through the skin. Having covered the patch to be operated upon with a series of incisions running in one direction, a fresh series, perpendicular to the first, should follow, and even a third series may be practiced,

until the diseased skin is fairly hashed up by the knife. Excepting in persons of particularly tough fibre, it will be necessary to freeze the skin, with a little bag of ice and salt, or by means of ether or rhigolene spray, before operating. Bleeding may be checked at once by the application of absorbent cotton with pressure. Successive patches of a square inch, more or less, may be operated on daily, until the entire surface has been covered. When the wounds are healed, which will be very soon, the operation can be repeated on any patches that may have escaped. Scarification thus accomplished leaves little scar, and gives more satisfactory results than any other treatment.

Another form of treatment highly recommended is that by means of the Paquelin cautery, heated barely red and run over the surface of the disease very superficially. If one operation is not enough to cover all the ground the remainder may be covered at another sitting. Iodoform is then applied, which forms a crust. After ten or twelve days this falls off, leaving a smooth, pale surface.

Lupus Exedens, a name given in former times to a rapidly eroding, ulcerative disease of the face, usually infiltrating epithelioma, rodent ulcer or syphilis. (See *Epithelioma*, *Ulcer—rodent*, *Syphilis of the skin—ulcerative*), rarely true lupus.

Lupus Vulgaris. Lupus vulgaris is a very chronic, new cell growth, depending, in all probability, upon infection with the bacillus tuberculosis, characterized by variously-sized and shaped, reddish or brownish patches, consisting of papules, tubercles or flat infiltrations, usually terminating in ulceration and cicatrices.

The disease varies in appearance in different cases, and also according to the locality attacked and the stage of its development. It usually begins by the formation of small, yellowish-red or brown points under the skin, which increase in size, coalesce and form irregularly-shaped, roundish or serpiginous, ill-defined patches of various size. The points referred to enlarge until they form papules, and finally tubercles. (See

colored plate, Fig. F.) It is at this stage that the disease usually comes under notice. The lesions are of all sizes, from pin's head to split pea, are brownish- or yellowish-red in color, and are covered with a thin layer of imperfectly-formed epidermis. They are firm or soft, and are painless. At this stage of development the disease may retrograde and terminate in absorption of the lesions, leaving a thin, desquamative, cicatricial tissue, or it may go on to ulceration and complete destruction of the infiltrated skin, resulting in much disfigurement. In its earlier stages lupus vulgaris is rarely attended with any subjective symptoms, but later there is sometimes pain. The commonest seat of the disease is about the face, especially the nose, cheeks and ears. It frequently attacks the extremities, especially the fingers, where it may result in serious deformity. The limbs and trunk may also be involved. Lupus vulgaris is a destructive disease, often resulting in serious disfigurement. It spares none of the external tissues, and may invade the mouth, cartilages of the nose, ear, larynx, and even the eye.

The disease usually originates in childhood. It is never congenital. It is rarely, if ever, hereditary. It is much commoner on the continent of Europe than in Great Britain, and is very rare among natives of the United States. I do not remember to have met with a lupus patient who was born in this country, though I cannot say that it never attacks the native American. It is a disease of the lower classes, not commonly attacking the well-nourished, but usually the debilitated and ill-fed. It is believed to be closely related to tuberculosis of the skin and other organs, although full agreement has not yet been reached by observers.

The diagnosis of lupus vulgaris from syphilis, the disease with which it is most likely to be confounded, is chiefly to be made by the history of the case in question. In addition, the ulcers of lupus are comparatively superficial; those of syphilis ordinarily deep, and often have an excavated appearance. The ulcer of lupus is commonly less extensive than that of syphilis. In lupus

there are, as a rule, a number of points of ulceration which tend to become confluent; whereas, the ulcers of syphilis usually remain distinct. The border of the syphilitic ulcer is sharply defined; that of lupus is not apt to be so. The secretion of the syphilitic ulcer is apt to be copious and offensive; that of lupus is scanty and inodorous. The crusts of lupus are thin and brownish; those of syphilis are bulky and frequently have a greenish tinge. Lupus is slow in its course; syphilis is rapid. A syphilitic ulcer may form in five or six weeks, while it may take as many years for the lupus disease to give rise to so much destruction. The scar of lupus is distorted; hard, shrunken and yellowish. That of syphilis is whitish, smooth, thin, often surprisingly small, considering the destructive process which has gone before. A history of other syphilitic symptoms is sometimes, though by no means always, to be obtained in syphilitic ulcer, and too much stress must not be laid on the absence of this.

Lupus may be confounded with epithelioma. Though the diseases may occur together, yet such occurrence is rare. The localization of epithelioma, with its usually painful character, and the circumscribed induration of the lesion, will usually serve for the diagnosis. The ulceration of epithelioma generally starts from one point and spreads peripherally, while the ulceration of lupus usually begins at many points within the patch. Epithelioma very seldom occurs in the young; lupus begins in childhood.

Lupus vulgaris is to be distinguished from *L. erythematosus* by the occurrence of ulceration, which never takes place in the latter. The patches in *L. erythematosus* are superficial, uniformly reddish in color, and are covered with adherent, grayish scales. They are, moreover, circumscribed, and are without papules or tubercles. The sebaceous glands and follicles are generally markedly involved in *L. erythematosus*; in *L. vulgaris* they remain unaffected.

Acne rosacea at times bears some resemblance to lupus vulgaris, but may readily be distinguished by its dilated vessels, color, the presence of acne pustules, its history and its course,

DIFFERENTIAL DIAGNOSIS

BETWEEN

LUPUS VULGARIS.

1. Commences usually before the age of twenty-five, and often much earlier in life.

2. An indolent, painless affection.

3. Edges of patches, though often round and elevated are soft.

4. Ulcers in most cases superficial, soft, throwing out profuse granulations and edges often undermined.

5. The nose is the part of the face oftenest attacked.

LUPUS VULGARIS.

1. Commences in early life, usually after twenty-five.

2. Often a history of hereditary tendency to strumous affections.

3. Oftenest met with on the face,

4. Ulceration has a tendency to throw out profuse granulations, and edges often undermined.

5. Color of lesions yellowish-red or violet.

6. Often of many years' duration.

7. Cured by the use of caustics and anti-strumous remedies.

8. Often other manifestations of the strumous diathesis.

EPITHELIOMA.

1. Occurs usually in persons getting on in years.

2. Tingling, itching, crawling sensations in earlier stages, pain, sometimes lancinating, later.

3. Edges hard, everted, and often having a glistening, translucent appearance.

4. Ulcers oftener deep, hard, with uneven, finely granular appearance and exuding a sticky fluid, which gives a varnished appearance to the surface.

5. The nose is not more frequently attacked than other parts of the face.

LATE FORMS OF SYPHILODERMA.

1. Appears usually after the age of twenty-five.

2. History of syphilis having been acquired.

3. On any part of the body, though often on the face.

4. Ulceration, as if cut out with a punch, and base ash gray.

5. Eruption in chronic stage usually ham or copper colored.

6. Chronic, though not nearly so so much so.

7. Cured by mercury or iodine.

8. Generally other manifestations of syphilis.

The treatment of lupus vulgaris is chiefly local, though constitutional remedies are also to be employed. It appears to be somewhat more amenable to internal treatment in this country than abroad. It is, however, one of the most obstinate of all cutaneous diseases. Hygienic treatment is of great importance. Cod-liver oil is the most efficient internal remedy, and, next to this, iodide of potassium. It may be given with the oil, as may also iodine and phosphorus. Internal remedies should usually be well tried before external applications are made, as they alone sometimes suffice to obtain a cure. The external remedies used in the treatment of lupus vulgaris are of a mechanical nature, or comprise various caustics. They should be selected with a view to the extent, locality and character of the lesions in any given case. In the earlier stages stimulating applications may be employed, with a view to bring about absorption. Equal parts of tincture of iodine and glycerine, painted over the part, mercurial plaster, tar and ointment of the red iodide of mercury may be used for this purpose. I must confess, however, that in my hands these milder remedies have usually failed of success, and I have always, sooner or later, had recourse to more severe measures before a cure could be obtained. Of true caustics, potassa, nitrate of silver, arsenic, carbolic acid, acetate of zinc, chloride of zinc and pyrogallic acid may be mentioned. The first and last of these I believe to be most efficient.

Caustic potassa should be used when thorough and extensive destruction of tissue is desired. A stick of the caustic should be wrapped in a bit of rag, with only the point protruding, and this should be bored into all the disease-foci, which will be found to break down easily. It should be remembered that the effect of this caustic goes somewhat beyond the point touched. Dilute acetic acid or vinegar should always be kept at hand to limit and check the spread of the caustic and to neutralize it. The pain is severe for the moment, but ceases on the application of the acetic acid or vinegar. Nitrate of silver is efficient in some cases, and does not leave scars. Papules and tubercles may be destroyed by boring into them with the solid

stick, while patches are most successfully treated by the saturated solution repeatedly applied with the charpie brush. Nitrate of silver is one of the best caustics to use in operations on lupus about the face, but it does not penetrate deeply.

Pyrogallic acid, in the form of ointment, one drachm to the ounce, applied thickly spread upon cloths, and renewed twice daily, is painless and efficient in many cases. It selects the diseased tissue and acts but little, or not at all, on the healthy. Chloride of zinc is used according to the following formula:—

R. Zinci chloridi,
Antimonii terchloridi, . . aa 3 ij
Acidi hydrochlorici, q. s. M.

Enough acid is added to dissolve the chloride of zinc, and the mixture rubbed up in a mortar with enough powdered liquorice to make a paste. This is spread upon a cloth and applied while moist. It is a powerful caustic, very painful, and eats through healthy and diseased tissue alike. It has the high sanction of Hebra, but I have never found occasion to use it.

Erasion, or scraping by means of the curette or scraping spoon, is useful in many cases, and is a plan of treatment I can highly recommend from experience. The instruments are cup-shaped, of steel, with sharp edges, and fastened by a short shank to a convenient handle. In size, they vary from a split pea to half the size of a teaspoon.

FIG. 13.



DERMAL CURETTES.

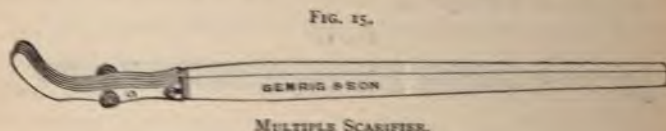
The part to be operated upon is first frozen by means of a hand-ball atomizer, charged with ether or rhigolene, or by the application of a gauze bag filled with powdered ice and salt,

and the diseased tissue is scraped or dug out. If any of the diseased tissue is left, a recurrence of the lupus must be looked for; the operation, therefore, must be thorough. Small nodules remaining may be removed by the use of the dental burrs and ex-



cavator here pictured, as suggested by Dr. George H. Fox, of New York. Scraping may often be appropriately supplemented by the application of caustics, as pyrogallic acid, caustic potassa, or even the actual or galvano-cautery. One of the best forms of treatment is by linear scarification. Squire has devised a multiple-bladed knife, by which this operation, over large surfaces, is much facilitated.

The scarifier pictured below is one which I have devised, employing the principle suggested by Squire, with an arrangement of the blades suggested by Pick. In my instrument, five blades, shaped like those commonly employed for gum lancets, are arranged parallel to one another, the central one being fixed in a small ivory handle, and the others being removable so as to facilitate their cleansing. The handle of the instrument is to be held like a pen, and a series of parallel cuts are to be made,



going as deeply as is considered necessary. Cross cuts are then made and the cross hatching is continued until, in severe cases, the whole surface is hashed up. The wound is to be

* In ordering these instruments, they should be designated plainly as Excavator, No. 10, and Round Burrs, Nos. 3, 8 and 11, of the S. S. White Dental Manufacturing Company's list for 1888.

dressed antiseptically. The operation may have to be repeated, but in the end a clean, healthy scar is the result.

Bésnier considers that lupus vulgaris is often transmitted by the "bloody operations," as they are called, such as excision, scarification with knives, erosion with curettes, etc. He therefore recommends the employment of the electro-cautery.

Bésnier employs a number of electro-cautery knives of various shapes, with the view to reach all the various sized and shaped deposits of lupous tissue in the skin. Many of these I habitually employ. (See Fig. 8.) My favorite knives are the flat-bladed knife and the point. The handle employed and also the battery are figured under *Electricity in the Treatment of Skin Diseases*.

When only a small space is to be covered, most patients can endure the pain, which is but momentary. When a considerable area is to be operated upon, however, ether must be administered.

The knives are to be heated to a dull cherry-red, and as most operations are about the face, some care must be exercised to avoid ignition of the ether when this anæsthetic is employed, and even more when rhigolene spray is used.

The prognosis of lupus vulgaris will depend upon the form of the disease, its duration, the age of the patient, and the extent of surface involved. The disease, in any case, is very stubborn, and runs a chronic course. If it be confined to one patch or region, a more favorable termination can be looked for. The disease usually results in marked scarring and deformity.

Lymphangioma (*limf-ăn-jî-ô'-ma*). New growths of lymphatic vessels in the skin have been noted as constituting a cutaneous disease, and have been described as "lymphangioma tuberosum multiplex." I met with such a case some years ago, and read an account of it before the American Dermatological Association. At that time Dr. Wigglesworth called my attention to certain points of resemblance between my case and certain ones reported by him as cases of fibroma molluscum, and I am now inclined to think that my own case, as well as the others described, rather belonged to the class of fibroma molluscum. (See also *Angioma*).

Maculæ Atrophicæ. (See *Atrophy of the Skin*.)

Madura Foot. (See *Fungous Foot*.)

Malignant Papillary Dermatitis. (See *Dermatitis, malignant papillary*.)

Malignant Pustule is due to the inoculation of a peculiar, virulent poison, generated in cattle suffering from a disorder known by the name of murrain or "charbon." The hands are usually inoculated first in persons engaged in dealing with cattle and hides, and after an incubation of only a few hours, pain, burning and itching are experienced at the point inoculated, followed by the formation of a vesicle or pustule, with an extensive hard areola; the pustule increases to the size of a quarter-dollar, and soon breaks into an unhealthy discharging ulcer. The constitutional symptoms are usually severe; a fatal result is not uncommon. It is said that the disease can be conveyed by flies.

The treatment consists in promptly destroying the diseased patch with caustic potassa, and applying disinfectant poultices and washes. The patient is to be supported by stimulants, etc.

Medicinal Eruptions. (See *Dermatitis medicamentosa*.)

Melanoderma. (See *Chloasma*.)

Mentagra. (See *Sycosis* and *Tinea sycosis*.)

Miliaria (*mī-lī-ā'-rī-ā*). An affection of the skin in which there is an obstruction to the sweat secretion with or without inflammation, as a cause or consequence. The non-inflammatory form is called *sudamen*, or miliaria crystallina. The lesions are minute, clear, or pearly vesicles, closely crowded together, but never confluent, occurring usually on the trunk, especially on the neck, chest and abdomen, though they may appear anywhere. They form rapidly, do not enlarge after the first few hours, and get well in a few days, unless fresh crops appear, which may keep up the eruption for weeks.

The lesions are simply the result of the sweat being unable to escape, owing probably to an accumulation of epithelium at the orifice of the duct, when the sweat function is in abeyance, as in fevers; then when the secretion is restored, especially by a "critical sweating," the fluid being unable to escape by a

natural channel is effused under the horny layer and forms a vesicle. (Crocker.) Robinson has made a careful and critical microscopic study of the lesions.

Miliaria vesiculosa, or *rubra*, says Crocker, has the same relation to sudamen (*M. crystallina*) as *acne vulgaris* has to comedones. Inflammation occurs in the gland as a consequence of retention of the sweat secretion, vesicles arise in great numbers upon the trunk, especially upon the back, but they may also come upon the face and limbs. The lesions are acuminate in form, whitish or yellowish in color, and situated on a raised red base (the "*miliaria rubra*" of authors). The vesicles run an acute course, drying up in a day or two and terminating in slight desquamation. The affection may come to an end in a day or two, or may last some time, depending upon the persistence of the cause, usually hot weather or excessive clothing. This is the *strophulus* or *red gum* of older writers, and is very common among infants, especially in summer. There is a good deal of prickling or itching as a general thing.

Miliaria papulosa is the affection formerly known as *Lichen tropicus*, or "prickly heat." It consists of minute red, acuminate, discrete papules closely crowded together with vesicles or vesico-pustules interspersed. It comes out suddenly over large areas and is accompanied by excessive sweating and intolerable prickling and tingling. It is said to differ from *M. vesiculosa* in that the inflammation produces the obstruction to the sweat secretion instead of *vice versa*, as in the former disease. It is essentially a tropical disease, though in a milder form often met with in our hot American summers.

Miliary fever, or "sweating sickness," is an epidemic febrile disease in which profuse sweating and miliaria are prominent symptoms. It was very fatal in the later middle ages, and an epidemic has been described as occurring in France so late as last year.

Sudamina or *M. crystallina* occurs as a symptomatic eruption near the termination of fevers, such as typhus, typhoid, acute rheumatism, puerperal septicæmia, or in tuberculosis. It is a

symptom of depressed vital powers. The other two varieties are, as has been said, usually due to overheating and the induction of excessive sweating. In the tropical form it is said that one attack predisposes to others. The disease may run on into eczema.

The treatment of miliaria includes removal of the cause when this is possible, that is, keeping the patient cool and lightly clothed. Cool baths and saline diuretics are usually to be recommended. Vinegar and water, dilute lead water, black wash, or some soothing and astringent lotion, such as is recommended under eczema, may be employed. Solution of sulphate of copper, ten grains to the ounce, may also be employed. It is a favorite remedy, I understand, in Cuba and the West Indies. Astringent powders, as bismuth subnitrate, oxide of zinc or kaolin, are also useful. The camphor powder described under acute eczema will often relieve the prickling and burning. Ointments are out of place. In the severe forms of the tropical variety, I should think that tincture of belladonna in two drop doses, or sulphate of atropia in $\frac{1}{120}$ grain doses, pushed to its physiological effect, might prove useful. I have never had an opportunity to try this treatment, as the milder local measures mentioned always suffice in our climate.

Milium. Milia are those small, roundish, whitish, pearly, non-inflammatory elevations which are situated in the skin, just beneath the epidermis, and which have their seat, for the most part, upon the face, although they may occur elsewhere upon the body. They may occur singly or in great numbers, and when formed may last for years without change. They give rise to no subjective sensations, and no annoyance beyond the slight disfigurement which they cause. The affection consists in an accumulation of sebum within the sebaceous gland, which, owing to the obliteration of the duct, is unable to escape. The treatment consists in opening each one of the little pearly masses, squeezing out the cheesy, sebaceous matter which forms its contents, and, if there is any tendency to return, cauterizing the sac with a point of nitrate of silver or a drop of tincture of iodine.

Mole, Pigmentary. (See *Angioma*.)

Molluscum Contagiosum. (See *Molluscum epitheliale*.)

Molluscum Epitheliale (*möl-lūs-kūm ēp'-ī-thē lī-ā'-lē*), formerly called *Molluscum contagiosum*, is a disease of the skin, characterized by the appearance of rounded, semi-globular or wart-like papules or tubercles, of a whitish or pinkish color, varying in size from a pin head to a pea. The lesion frequently looks like a drop of wax upon the skin, or like a pearl button, flattened on top and with a darkish point in the centre, representing the aperture of a follicle. (See colored plate, Fig. G.) They usually occur on the face, especially the eyelids, cheeks and chin. They are also met with on the neck, breast and genitalia. They increase in size slowly or rapidly, and are usually without sign of inflammation, though inflammation may exist at times. They eventually terminate by disintegration and sloughing of the mass. They give rise to no pain, itching or other inconvenience. Notwithstanding the numerous studies which have been made of the disease in late years, opinion is divided as to whether or not the affection is contagious.

Molluscum epitheliale is liable to be confounded with Molluscum fibrosum, but the two may be distinguished by their anatomical characters. In M. epitheliale the opening of the follicle can usually be seen as a blackish point at the apex of the tumor. The lesions are superficial and rise above the skin. They are mostly confined to the face. The tumors of M. fibrosum do not show the black follicular opening. They are also found in great numbers all over the body, and are not confined to one or two localities. From warts, which they sometimes resemble, the tumors of M. epitheliale must be distinguished by a careful comparison of structure.

Local treatment is alone required. Applications of ointment of white precipitate, or sulphur ointment, well rubbed in, will sometimes suffice to remove the tumors. If this fails they may be opened with a small knife, the contents squeezed out, and the bottom of the cavity cauterized with nitrate of silver. They may also be burned out with mild caustics, but severe measures

should never be used, because the disease is slight and tends to get well spontaneously. Electrolysis has been recommended by Rohé and Hardaway. (See *Electricity in Skin Diseases*.)

Mother's Mark. (See *Nævus*.)

Mole. (See *Nævus pigmentosus*.)

Molluscum Fibrosum. (See *Fibroma molluscum*.)

Morphœa (*môr-fê-â*). An affection of the skin characterized by the appearance of one or more patches of various size, roundish or ovoid in shape, on a level with the surrounding skin, smooth or slightly scaly, and giving a sensation of peculiar firmness to the touch.

The patches show two zones of coloration. The central part is usually of a grayish or yellowish-white color; it is separated from the healthy skin by a lilac-colored ring showing enlarged capillaries.

These patches are found on all parts of the body, but are most commonly met with upon the neck, chest, abdomen and limbs. They give rise to no pain, nor, in fact, any sensation, excepting occasionally some slight itching.

Morphœa is now regarded by most writers as a tropho-neurosis, and one of the earlier stages of scleroderma. Some few writers, however, consider it an independent disease. (See *Scleroderma*.)

Mycosis, or Mycosis Fungoides (*mî-cô-sîs fûng-gôyd'ês*), is a disease of the skin characterized by the appearance of soft, red, mammillated tumors, which may go on to the formation of fungous ulcers of unhealthy appearance. Anatomically the tumors show a development of lymphatic globules (small cell infiltration) and a reticulum analogous to that of lymphatic glands, whence the name "lymphadénie cutanée," proposed by some French authors.

Symptomatology. The symptoms characteristic of mycosis are variable at different periods of the disease. At first, bright-red erythematous patches on a level with the skin, or slightly raised above the general surface, appear at one or more points, accompanied by pruritus. These occasionally resemble the lesions of urticaria—in fact, urticarial patches have been observed in some cases. Later the lesions become covered with scales, or vesicles

and papules, or may become raised, hard and fissured, assuming somewhat the appearance of chronic, infiltrated eczema papulosum ("lichen"). At other times they may diminish and disappear like eczema, without leaving a trace. This peculiarity led Hardy to give his earlier cases the name of "lichen hypertrophicus." While these erythematous or lichenoid lesions mark the earlier stage of the affection, sooner or later, after months, or perhaps years, it takes on the more especial features which give mycosis its peculiar and characteristic aspect. On, or alongside of, the lichenoid patches, vegetations and growths occur, at first wart-like, later profusely hypertrophic—frambœsioid. Once formed these lesions increase rapidly in size, and they may attain the dimensions of a cherry-stone, an almond or a small orange. They are red, sometimes violaceous, vascular, somewhat firm, of uneven surface, so as sometimes to resemble tomatoes. The growths may be solitary or grouped and united at the base, but separated at the summit.

The surface of the hypertrophied tumors is at first dry, smooth, sometimes slightly scaly. The pruritus, a marked symptom of the early lesions, diminishes at this stage, and there may be even a slight diminution of sensibility, and any hairs which may grow from the surface are apt to fall out.

After continuing in this state for a considerable time the tumors may suddenly change in one of two quite diverse directions. Either they may, as some do, undergo rapid interstitial absorption, become retracted, shrivel up and disappear, without leaving any trace, in ten to twenty days, or, on the other hand, they may become moist and crusted, or break down and suppurate profusely, with an ichorous discharge. Now and then the body of the tumor remains firm, while a crater-like cavity forms in its centre, and in rare cases the new growth, followed by destructive metamorphosis, may go beyond the skin and penetrate the subjacent tissues to the very bone.

Simultaneously with the development of the skin lesions the lymphatic glands, especially those in the axillæ, groins and cer-

vical regions, increase in size, and become painful. While these glands may attain a considerable size, they rarely suppurate.

In the earlier stages of the disease patients usually preserve their health to a fair degree, but when the tumors multiply rapidly, and especially when they begin to suppurate, the general health fails; indigestion, diarrhoea and marasmus supervene.

Mycosis may invade any and every portion of the integument, but the lesions are more frequently observed on the trunk, and on the proximal and inner portions of the limbs, than on the face and extremities.

Mycosis is an essentially chronic disease, taking usually years to run its course of erythematous and papular development, retrogression, relapse, hypertrophy, ulceration, etc. Exceptions occur, and the hypertrophic and rapidly ulcerating lesions may form the first stage in its development.

The disease usually terminates fatally, and even in those cases in which a return to health has been observed, the patients do not seem to have been kept under observation long enough to make it certain that a permanent cure had been obtained. Ordinarily the patient succumbs to some accidental complication, or to cachexia, or more frequently with the symptoms of leucocythæmia.

Only one form of treatment has been recommended with any hope of success: the administration of arsenic, in full doses, by the mouth or hypodermically.

Nævus. (See *Angioma*.)

Nævus Pigmentosus (*nē'-vūs pig-mēn-tō'-sūs*). Nævus pigmentosus, or pigmentary mole, may consist simply of a circumscribed pigmentary deposit in the skin, without hypertrophy of the connective-tissue elements or of the hairy system; or in addition to the excess of pigment there may be hypertrophy of all the cutaneous structures, especially the hair. Pigmentary nævi vary greatly in size and shape. They may be small, the size of a split pea or bean, or large, covering a considerable area. The outline of the smaller lesions is usually roundish,

that of the larger may be irregular. In color, moles vary from light fawn to jet black. When smooth on the surface, and level, or nearly so, with the skin, they have been called *nævus spilus*. When rough, uneven, and warty, they are called *nævus verrucosus*. Sometimes they are met with as thick, soft, connective-tissue growths of variable dimensions, being then designated *nævus lipomatodes*. When hairy they are called *nævus pilosus*. Sometimes pigmentary nævi are smooth and hairless, at other times they are more or less covered with hair.

Pigmentary nævi may be single or multiple. Hyde has described a case where a great number of scattered moles were distributed in bands on the left side of the trunk; while De Amicis has seen a case where the whole cutaneous surface was covered with hundreds of disseminated blackish-brown moles, from the size of a pin-head to that of a bean, some of which were hairy.

Moles may occur upon any part of the body, but are more common upon the face and trunk. Sometimes they appear over the course of nerve-tracts. The smaller moles are often acquired, while larger hairy nævi are congenital.

The treatment of pigmentary nævus consists in removal of the growth, when this is possible. The smaller lesions may be removed by the aid of caustic potassa, nitric or glacial acetic acid, or ethylate of sodium. Small hairy moles of the face are best removed by electrolysis, as described under *Hypertrichosis*. The same operation which removes the hair removes the mole also; of course a small scar remains, but this is comparatively insignificant.

Larger pigmentary nævi are to be removed by the knife, and a deep scar necessarily follows.

Nævus Pilosus. This is a hairy mole, such as is often seen upon the face and elsewhere. For treatment, see *Nævus pigmentosus* and *Hypertrichosis*.

Nails, Diseases of. (See also *Eczema*, *Psoriasis* and *Syphilis*.) Under this head are to be considered only those affections which involve the horny substance of the nail itself,

and which in almost every instance proceed from some influence exerted upon the matrix. The affections known as *onychchia* and *paronychia*, affecting the nail plate only secondarily, will be found described under their respective heads.

Hypertrophy of the nail may include an increase in the number of the nails or in the substance of one or more individual nails. Instances of the former are observed as an anomaly, and comprise the occurrence of nails on the last phalanx of supernumerary fingers and toes, the presence of double nails on one finger or toe, or the occurrence of completely or imperfectly developed nails at unusual points, as on the end of the first phalanx after an amputation, on a metacarpal stump, etc., or as a malformation in the region of the scapula.

Increase in the substance of the nail may take place simply as a thickening, or as a general enlargement of the whole substance of the nail. Both are known as *onychauxis*. In the first form the nail is unshapely, thick, opaque, glossy on the surface, or spherically curved, and of a grayish-white color, has a massive feel, is heavy, and so hard that it can only be cut by a saw. When the change affects the whole nail it often shows at its free border a tendency to curve downward. In the second form of hypertrophy, should the nail increase in a lateral direction, the effect is felt in the soft parts; should it increase longitudinally, it may grow several inches in length, curving and twisting grotesquely, and forming the deformity known as *onychogryphosis*. Onychogryphotic nails have a dirty yellow, brownish, or grayish color with a shining lustre, and are marked with longitudinal and also transverse ribs, with occasional horny plates. The under surface is usually brownish, with an irregular, flaky exterior interrupted by smaller or larger cavities, and crossed here and there by transverse ridge-like projections. The anterior portion of the matrix, and the entire area of the nail-bed, are shown by microscopical examination to be in a chronic state of irritation.

Onychauxis may be congenital or acquired. At birth the nail may be only slightly developed in excess of its normal

average, but it grows with a greater relative rapidity. The various diseases associated with papillary hypertrophy (*e.g.*, ichthyosis) seem to favor the development of this inborn tendency in the nail. More commonly onychauxis is acquired and may be traced to some traumatic cause—to neglect, to the extension of morbid inflammatory processes of the corium and the connective tissue of the cutis to the matrix of the nail (*e.g.*, psoriasis, chronic eczema, lichen ruber, lepra Græcorum, elephantiasis Arabum, etc.). Some predisposition to onychauxis must, however, exist in these cases, as not every case of these diseases shows hypertrophy of the nail (some even show atrophy), and as, furthermore, the nails are, at times, affected when the skin disease does not exist in contiguous parts.

Symptomatic hypertrophy of the nails sometimes occurs in neuropathic affections of a degenerative or irritative character, most frequently in spontaneous neuritis, neuralgia, chronic myelitis, traumatic lesions of mixed nerve trunks ("glossy skin"), etc. The same alteration of the nails may occur after various chronic diseases, as articular rheumatism, affections of the bones, or ankylosis. Partial hypertrophy may occur after various ulcerative processes in the nail bed, in which the remaining part of the matrix appears to attempt to make up the loss.

The effect of hypertrophy of the nails is not only cosmetic deformity, but absolute loss of tactile sense to a greater or less degree. The person is unable to execute delicate or fine work. Fortunately, onychogryphosis of the fingers is rare, and even onychauxis to a marked degree is uncommon. When the toes are affected, walking may be more or less interfered with, and in advanced cases may become altogether impossible. Lateral hypertrophy may produce inflammation and ulceration in the surrounding soft tissues (ingrown toe nail).

The prognosis in hypertrophy of the nail depends upon the chance of removing the cause. Of course, the hypertrophied nail can in no wise be altered, but if the eczema, psoriasis, etc., can be cured, there is good reason to hope that a healthy nail may be developed from the matrix. In the case of such diseases

as lepra or elephantiasis, where the disease is incurable, but little hope can be entertained of improving the state of the nail. The same is true when the matrix has been altered by traumatic influences to an irremediable extent.

The treatment consists in removing the cause when attainable, and in doing away with the hypertrophied product when this becomes a serious annoyance. The nail may be removed by means of the knife, cutting pliers, or, in extreme cases, the saw. Where the nail has enlarged in width, it may press upon the lateral furrow to a greater or less extent, and when to this is added pressure from a tight shoe, considerable irritation and inflammation of the soft parts may ensue, followed in extreme cases by great destruction of the neighboring tissues, even involving the tendons and bone.

With regard to the treatment by removal of the cause, if eczema, psoriasis, or other disease exists, this must be removed by appropriate local remedies, ointments, rubber finger stalls, etc. When eczema is present on the body, iron, arsenic, and other remedies appropriate to these affections of the skin will also be found to affect the nails favorably. When the disease of the matrix and nail bed is due to any form of syphilis, internal treatment appropriate to that disease is called for, and, in addition, the local application of powdered iodoform, mercurial ointment, or solution of corrosive sublimate, 1 to 250 of water.

When the cause is traumatic, as from an ill-fitting shoe, this should be remedied, or when from severe occupation, protection of the finger or toe by soft wax or other mechanical device.

Atrophy of the nail, like hypertrophy, may be congenital or acquired. The congenital form is met with in connection with imperfectly developed fingers and toes, the nail being either entirely absent, imperfectly developed, mutilated, or coalescing with other nails.

The acquired form of atrophy of the nail is met with as a result of traumatic influence, as pressure of shoes, etc., which at times may produce hypertrophy, and at other times atrophy. The nail formation may also be hindered by a knock, blow,

pinching, etc. Geber looks upon white spots on the nails as a sign of insufficient cornification of the nail cells, traceable to mechanical influences.

Thermic and chemical sources of irritation are not uncommon causes of atrophy of the nail, as are also inflammations associated with suppuration and ulcerative processes.

Among the constitutional causes of retarded nail growth are febrile conditions and chronic wasting conditions of the general organism. Typhoid fever on the one hand, and tuberculosis on the other, may be mentioned as typical causes. Those cutaneous diseases and nervous affections which produce hyperplasia of the nails, such as ichthyosis or ataxia may, under other conditions, give rise to precisely the opposite effect.

The imperfectly developed nail is whitish-gray, lustreless, thin and delicate, giving the impression of a thickened membrane; possessing but slight hardness, readily broken and flexible. At times the substance is so friable that it exfoliates longitudinally, and fractures through its thickness, thereby rendering the nail uneven.

The treatment includes first, frequent trimming and covering of the affected nail with a protective layer of wax. The removal of the etiological factor is next to be attended to. The main point is to keep away any possible injurious influences, to cure, if possible, any accompanying skin diseases, dyscrasic or nervous affections, inflammations and ulcerative processes, and to support the strength of the patient when impaired nutrition may be the cause. When the defective nail formation is due to some incurable disease, it is, of course, impossible to expect a change for the better. Geber thinks that equable pressure exerted by strips of adhesive plaster upon a wax nail fastened to the nail bed will hasten the regeneration of the nail.

Deformity of the Nail. Deviation in form, degeneration, or discoloration of the nail, are all deformities of the nail as distinguished from simple hypertrophy, and are due to various causes.

Malformation of the nail plate is a result of disturbed func-

tion of the matrix. The latter may be the result of nerve disturbance (paralysis), of injury, malformation of the lateral furrow, inflammation of the underlying connective tissue, periosteum, bone, etc.

Nails suffering from deformity may be long, short, narrowed, or curved one way or another, occasionally pointed. I have reported a case where the nails were curved or rolled in at the edges so as to present a semi-cylindrical figure, and so shrunk that they occupied only about one-half the normal width of the nail bed. The case was that of an infant suffering from hereditary syphilis. The deformed nails were gradually replaced by normal ones as the infant regained health under treatment.

Sometimes deformity of the nails may be hereditary. As the cause can rarely be removed, the affection is usually irremediable. Fortunately, it is rarely more than a mere disfigurement.

Degeneration of the nail may occur as a result of faulty nutrition, but is also met with following chronic inflammatory processes (paronychia sicca) of the matrix. The nail may be thick or thin, or more frequently fibrous, and spread with an irregular detachment of particles. The color changes to a grayish-white or dirty yellowish-gray. Aside from disfigurement these nails are very troublesome, as they are continually breaking and splitting, and occasionally denude the nail bed. Removal of the cause, when this can be ascertained, and protection by the wax nail-covering and bandage, may be recommended when practicable.

Discoloration of the nail is only worthy of a passing notice. The changes to purple, to chalky-white, to yellow, etc., in various diseases, are probably due only to the translucency of the nail showing the congestion or discoloration of the tissues beneath.

Traumatic and chemical injuries may affect the texture of the nail from a distance. Thus, workers in acids, etc., and those who use peculiar tools, may have alterations in the nail following long-continued action at a distance. The animal and vegetable parasites may also affect the texture of the nail.

Parasitic Diseases of the Nail. The itch insect, "sarcoptes scabiei," may give rise to various changes in the nail. Boeck states that the eggs and excrement of the sarcoptes are to be found in the degenerated nail substance. Bergh has shown that the deviations in the nail due to the sarcoptes are brought about on the one hand by affection of the nail bed and matrix, and on the other by implication of the nail substance.

The collective result of these influences is that the nail bed becomes thereby hypertrophic and greatly bulged out longitudinally in the middle. The lower surface of the nail itself is studded all over with irregular projections and hollows, often even deeply excavated or conically depressed. The nails assume a horny or claw-like appearance, and are considerably thickened, yellowish or brownish in color, and on section show an asbestos-like whitish or yellowish, flaky or fibrous, appearance. On microscopic examination Bergh found itch mites, eggs, egg shells, burrows, skins, and excrement of the parasites in the substance of the nail. The writer has never observed scabies of the nail, and is inclined to think that the disease does not exist among our more cleanly population.

Various tropical flies, which lay their eggs under the nails, may cause disease, but none of these is so harmful as the sand-flea (*Pulex penetrans*), which causes at first violent pain and, following this, paronychia.

Vegetable parasitic diseases of the nails are less uncommon than those caused by animal parasites. The disease is more apt to spread from the adjacent skin than it is to be implanted directly under the nail. The onychomycoses are, so far as yet known, of only two kinds, that due to favus, and tinea trichophytina. The clinical appearance is not very different, and will be described once for both. Favus is the more rare. The nail affected shows signs of change at an early date after the implantation of the fungus, becoming brittle, frayed out, and intersected by furrows, and presenting a discolored, opaque, grayish or yellowish-white appearance, and is more or less lifted up. When the process has continued for a considerable time the

alteration extends to the entire nail, and the matrix being implicated, changes in growth are perceptible. The nail becomes claw-like, thickened, flakes off even on the surface, and being detached here and there, and acquiring a faded, dirty yellow color, becomes exceedingly disfiguring. Rare cases of favus infiltration of the nail show the peculiar sulphur-yellow crusts or scutulate depressions; but the worm-eaten appearance produced by numerous other affections must not be mistaken for this, and, in fact, apart from the actual discovery of the fungus, an exact diagnosis cannot often be made. In this country, moreover, parasitic disease of the nail is excessively rare, and, in fact, I am not aware of any case of the kind having been reported, with the exception of Duhring's case of *tinea trichophytina unguium*, which was also under my own observation.

Longitudinal or transverse sections through a nail changed by the infiltration of fungus, show disintegration of the substance, and by treatment with glycerine, convoluted threads of mycelium and conidia mixed with cornified epithelium, can be observed under the microscope.

Naphthol. Properly β *Naphthol*. A derivative of the hydrocarbon series, bearing the same relation to naphthalene that phenol or carbolic acid does to benzine.

Crude naphthol is an impure article, occurring in reddish or deep violet-brown crystalline masses, of a disagreeable, pungent smell. In this state it is useful for external application, but when possible, as in private practice, it is better to use the recrystallized article, which is more expensive and occurs in fine crystalline scales of a white or slightly pinkish color and inodorous, or nearly so.

Naphthol dissolves in 520 parts cold water and 75 of hot. It dissolves freely in alcohol, ether, chloroform, benzol and oils.

Naphthol is one of the best remedies we possess in the treatment of *scabies*, and is also useful in some forms of *psoriasis*, *eczema* and *pruritus*.

Druggists often substitute hydronaphthol and naphthaline in

prescriptions, and this should be guarded against, in ordering from unknown sources.

Neoplasm, Inflammatory Fungoid. (See *Sarcoma* and *Mycosis fungoides*.)

Nettle Rash. (See *Urticaria*.)

Neuralgia of the Skin. (See *Dermatalgia*.)

Neuroma Cutis is a rare affection, characterized by the presence of variously-sized and shaped nerve growths, having their seat primarily in the true skin. The lesions are visible to the eye as split-pea-sized tubercles, scattered, or aggregated in large numbers over the affected locality. The lesions are of a rose or pink color, smooth and firm, and the intervening skin normal. Pain, of a paroxysmal character, and extremely severe, is the chief symptom. Movement of the affected part, a draught of cold air, or even mental worry and excitement are often sufficient to cause pain and even agony.

A microscopic examination of the tumors in the few cases observed has shown them to be composed of medullated nerve fibres and connective tissue in varying proportions, and in one case of smooth muscular fibres also. They were, in fact, actually fibromata, at least in the case of the older lesions. (See *Fibroma molluscum*.)

The affection must be distinguished from painful subcutaneous tubercle, a not uncommon affection. Here the lesion is usually single, and is not situated in the skin, but in the subcutaneous tissue.

The only treatment of neuroma cutis is the excision of a portion of the nerve trunk leading to the affected area. This has given entire relief in one case, while in another case the same operation failed entirely.

Neurotic Excoriations. Under this title the late Sir Erasmus Wilson described a peculiar affection of the skin, characterized as follows: "Hyperæmia, with induration, in small oval or quadrangular spots of about a quarter of an inch in diameter; a sense of fullness, burning, tingling, pricking, and itching; sometimes a vesication corresponding with the

diameter of the congested spot and very slightly raised ; sometimes an excoriation produced by rubbing or scratching ; more or less hemorrhage, followed by a black crust ; on healing, a pigmentary stain ; usually pigmentation of the entire skin to a greater or less extent ; and accompanying these symptoms a state of general nerve disorder sometimes assuming the characters of hysteria." In one case a lady, aged forty-seven, had the face spotted with small abrasions, oval or polyhedral in contour, for the most part square or oblong, and sometimes pointed toward the inferior margin. They were about one-fourth of an inch in diameter, and were fifteen or twenty in number, in various stages of advance and decline, scattered over the forehead and face. The patient's attention was first directed to their existence by a sensation of fullness, burning, and tingling, continuing for some hours, until relief was sought by rubbing or scratching. The effort of a very slight rub was to detach the cuticle, which seemed to slide off the spot, leaving an excoriated patch, which sometimes bled to a greater or less degree.

The pathological history of the affection was that of a hyperæmia giving rise to a flat, circumscribed induration, accompanied by slight redness, and with the sensation of fullness, burning and tingling, and then a slight serous exudation appeared beneath the horny epidermis, sufficient to loosen the cuticle, but rarely sufficient to develop a blister ; these several processes occupying only a few hours in their progress. Pigmentation was the final result. In the case above given the process had been going on for nearly two years.

In another case given by Wilson, that of a young lady, aged twenty, of markedly neurotic character and in a debilitated condition, a somewhat similar eruption broke out about the mouth after eating ice. She then, by accident, bruised her nose, and a second attack of the disorder showed itself on and around the injured organ ; a third attack became developed on the forehead, as the consequence of a draught of cold air. The skin became swarthy and pigmented. With reference to the spots, the patient observed that they developed with a feeling of

fullness, burning, tingling, pricking and itching; if left to themselves they frequently gave rise to a small blister, but the excessive pruritus usually caused her to rub or scratch them until the blood flowed, when relief would be obtained.

The face, in Wilson's experience, is the part most usually attacked, but it appears occasionally as a general affection. Wilson has seen a well-marked example restricted to the forearm, and especially to the district supplied by the ulnar nerve. When it occurs as a general affection it is apt to be mistaken for prurigo (pruritus?). Wilson likewise considers some cases of the affection to approximate to hæmatidrosis.

Since the affection usually occurs in highly nervous, anæmic, and sometimes hysterical females, the question as to their being factitious comes up for consideration. Wilson himself has little or no doubt as to the natural character of the lesions presented, but some other dermatologists consider them as artificially produced. It is certain that eruptions so closely analogous as to render their distinctive points difficult to bring out in a written description have been shown to be factitious (see *Feigned Eruptions*).

Again, some of the cases described by Wilson resemble in various points dermatitis herpetiformis. The stress which he lays upon the severe itching as a constant symptom, and the herpetiform character of the lesions in some cases, suggest this view. At present, however, Wilson's description and name are best preserved.

Nipple, Eczema of. (See *Eczema*. See, also, *Paget's Disease of the Nipple*.)

Nits. The ova of the *Pediculus capillitii* and of the *P. pubis*. (See *Pediculosis*.)

Noli-me Tangere. (An old name for *Lupus vulgaris*.)

Odor of the Human Body. (See *Bromidrosis*.)

Ointment. Under this designation are usually included all those substances of a fatty consistency, whether composed of fat or not, which are employed in medicine as a coating to the

diseased integument or as a means of introducing medicinal substances into the economy by way of the skin.

The softer preparations are sometimes called pomades, while those of a firmer consistency are known as cerates; but the various forms are usually included under the middle term "ointment."

Ointments usually contain lard as a basis, but marrow, suet, and mixtures of oils with paraffin or wax, are often employed. Some years ago the preparations known as cosmoline and vaseline, derivatives of coal tar, were introduced into use as bases for ointments, and they have found their way into general employment, and are at present designated by the expression *petrolatum* in the U. S. Pharmacopœia. More recently a substance has been brought forward known as lanolin, derived from the wool of sheep, in which the fatty acids are found in combination with cholesterin instead of glycerin, as is the case with the fats and oils in ordinary use.

Under the general designation of ointments may also be included certain pastes or similar mixtures of an ointment-like consistence and made up of kaolin and linseed oil, etc.

Ointments are employed with three principal objects: 1. To cover and protect abraded and inflamed areas; 2, to act as stimulants to the cutaneous surface; 3, as a means of conveying medicine to the skin or to the general economy. To meet the first indication it is requisite that the base of the ointment should itself be bland and unirritating. Hence, if fats are employed, these should be carefully selected and should be as carefully preserved from decomposition. In many cases fats of any kind are badly borne by the skin, and here the *petrolatum* base may often be made use of alone or in combination with starch. The stimulant effect of ointments is obtained by the addition of some ingredient, vegetable or mineral, of which this effect is desired. Most compound ointments belong to this class, and the skill and conscience of the pharmacist are tried to the utmost in their preparation. When a superficial effect is desired, any oint-

ment base will be sufficient, but where the medicinal influence is to penetrate deeper, the choice of a base is a matter of some importance. After a very extensive experience with all the bases hitherto brought forward, including those whose "penetrative" qualities have been most loudly trumpeted, I am of opinion that the true fats, of which lard is an example, are best calculated to carry medicinal substances into the system.

The systemic effects of medicines introduced through the skin by means of ointments is decided only in a few cases, of which mercury is a conspicuous example. Belladonna and other drugs also act vigorously in immediate proximity to the place of inunction, but with somewhat less intensity upon the system at large. In this use of ointments, even more than in their employment with the view to their local effect, the base of the ointment is by no means a matter of indifference. The kaolin pastes have little or no penetrative power, vaseline a less decided value in this respect than lard, and the latter, it is said, less than lanolin. With regard to this point I have just stated my own opinion, but it must be said that the views of various observers differ. Fox and Blanc think that lanolin is more readily absorbed by the skin than any other fatty substance, and is useful as a basis for ointments when an effect upon the deeper skin or upon the whole system is desired. On the other hand, Ritter, as the result of a series of careful experiments, cannot admit that lanolin has any advantage over other ointments in facilitating the passage of chemical matters through the skin.

Onychauxis. (See *Nails, Diseases of.*)

Onychia (*ōn-īk'-i ā*). (See *Nails, Diseases of.*) Inflammation of the matrix of the nail, usually followed by falling of the nail itself. One form of the disease is characterized by the formation of herpetic vesicles under the nail, with extreme neuralgic pain. The nail may or may not be thrown off in this form of the disease.

The treatment of onychia should be directed to the removal of any general cause in the condition of the system. Locally, the following ointment is of service :—

R. Liq. ferri subsulphatis, ʒ ss
 Ung. aquæ rosæ, ʒ ss. M.

Or, when there is much pain, the following :—

R. Hydrarg. chlor. mite,
 Pulv. opii,
 Extract belladonna, aa gr. iij
 Ung. aquæ rosæ, ʒ ss. M.

Onychia, Syphilitic. (See *Syphilis of the nail.*)

Onycho-gryphosis. (See *Nails, Diseases of.*)

Onycho-mycosis. (See *Nails, Diseases of.*)

Pachydermia. (See *Elephantiasis.*)

Paget's Disease of the Nipple. (See *Dermatitis, Malignant papillary.*)

Parasitic Sycosis. (See *Tinea sycosis.*)

Paronychia. (See *Nails, Diseases of.*) An inflammation around the edge of the nail—a whitlow or “run around.” It usually results from the nail taking an abnormal direction of growth and pressing into the soft parts.

Pediculosis (*Lousiness*) is a contagious animal parasitic affection, characterized by the presence of pediculi or lice, and the lesions which they produce, together with scratch marks and excoriations, accompanied by itching. Three varieties of the disease are encountered, which are designated according to the locality affected, viz., *pediculosis capilliti*, *pediculosis vestimentorum* and *pediculosis pubis*, or head, body and crab lice. (See below, under these titles.)

Pediculosis always occurs as the result of contagion; a spontaneous origin of the parasites is quite incredible. The pediculi do not bite, but are furnished with a sucking apparatus, which they insert into the mouth of a follicle, and obtain blood by the means of this.

The diagnosis of pediculosis may almost always be made by finding the parasites, but these are frequently few in number in any given case, and must be carefully searched for, remembering in the case of each variety its especial habitat. When the pediculi cannot be found, the location of the scratch marks offers

valuable circumstantial evidence pointing to the parasitic character of the disease. In the scalp and pubis the presence of nits or ova may almost always be made out, and also at times in the seams of the clothing, and they, of course, are pathognomonic. The prognosis of pediculosis is always favorable, and, when the directions are carried out faithfully, a speedy cure may be expected.

Pediculosis Capillitii is due to the presence of the *pediculus capitis* or head louse. It is the commonest form of pediculosis. The parasite is found on the scalp alone, the occipital region being the favorite seat. The lice are sometimes found in the scalp and sometimes on the hairs. The ova, or "nits," small, whitish, pear-shaped bodies, glued to the hairs by the smaller end, some distance from the scalp, resemble scales of epidermis. Head lice are usually met with among women and children of the poorer class, though they are sometimes found on persons of refinement. I have several times encountered them on ladies, where they appeared to have been contracted in sleeping cars while traveling. The parasites attack the scalp and give rise to considerable irritation, itching and consequent scratching. Effusion of serum, pus and blood results from this, and the hairs become matted together in a crust. Lice, as a rule, cause more mischief in those who are poorly nourished and ill-cared for. The majority of cases of eczema in the back of the head, in the poorer class of children, are caused by lice, and Dr. J. C. White has pointed out that, in children, when a characteristic form of eczematous eruption can be seen about the mouth, the nostrils and the ears, the lobes especially, the diagnosis can almost certainly be made of pediculosis capillitii. This eruption in some respects resembles that of impetigo contagiosa. When the affection has existed for some time there is a disgusting odor about the scalp; the patient loses sleep from the itching; the mind becomes harassed, and the general health may be more or less impaired.

The best treatment for head lice is to saturate the scalp nightly, for several successive times, with kerosene, care being

taken not to allow the oil to trickle down over the face and neck, for fear of its causing excoriations. A night-cap is to be used, and the head washed with castile soap and warm water in the morning. When kerosene cannot be used, the next best thing is the tincture of *cocculus indicus*. Where, owing to shortness of hair and the presence of eczema, ointments can be employed conveniently and profitably, that of ammoniated mercury, in the strength of twenty to sixty grains to the ounce, will be found useful. An ointment of one drachm of powdered stavesacre seeds to the ounce of lard is also a good remedy. The nits, which are, however, usually killed by the applications of kerosene, are to be removed by repeated washings with soda or borax washes, soft soap, vinegar, dilute acetic acid or alcohol. Greenough thinks the following formula best in the majority of cases :—

R.	Acid. carbolic,	gr. xv-xxv	
	Ung. petrolii,	℥j.	M.

This not only destroys the lice, he says, but sterilizes the ova. It is seldom or never necessary to cut the hair. In children it is often more convenient to do so, but in adults it is an unnecessary sacrifice, which may be avoided by patience in relieving the hair of pediculi and nits. The head coverings should be destroyed or thoroughly disinfected by baking or boiling.

Pediculosis Vestimentorum, or lousiness of the body, is produced by the *pediculis corporis*, body, or more properly, clothes louse, which lives in the garments, and thence makes predatory excursions upon the skin. It is very similar to the head louse, but is considerably larger and somewhat longer in proportion to its breadth, and shows a blackish tinge on the back. Body lice are apt to be found along the seams of the clothing, particularly where this comes in closest contact with the skin, as about the neck, shoulders, waist and buttocks. As they move over the surface or attack the skin, they give rise to intensely disagreeable, itching sensations. As the parasites multiply, the itching becomes so violent, that the distress is almost unendurable; the scratching is generally severe, and long

and streaked or short and jagged scratch-marks, with blood crusts and pigmentation, are characteristic features of the disease. On close inspection, the primary lesions, which are minute, reddish puncta, with slight areolæ, may be seen marking the points at which the parasite has drawn blood.

The chief seats of the lesions are the back, especially about the scapular region, the chest, abdomen, hips and thighs. When the affection has lasted for months and years general pigmentation may occur, as the result of long-continued irritation and scratching. Children are very seldom attacked. The disease is one of want, poverty and neglect. It sometimes occurs among the better class of people, particularly in the aged; but even here it will be found to have been brought about by want of personal care.

To get rid of body lice, a hot bath, with soap, should be taken while the clothing is being heated in an oven or boiled, or when this cannot be done, ironed along the seams with a hot iron, to destroy the parasites with their ova. After the bath, inunctions are to be practiced with an ointment of powdered stavesacre seeds, two drachms to the ounce, digested in hot lard and strained. A lotion of carbolic acid is useful to allay the itching:—

R. Acidi carbolici, ℥ iij
Glycerinæ, f ʒj
Aquæ, Oj. M.

The following is even better in old cases:—

R. Acidi carbolici, ℥ ij
Potas., caustic, ʒj
Aquæ, f ʒiv. M.

The potassa is dissolved in water, and slowly added to the carbolic acid in a mortar. The wash should be much diluted before applying.

The disinfection of clothing should be carefully carried out, and must be repeated again after a few days, if it has not been entirely successful.

Pediculosis Pubis. The *pediculus pubis*, or crab louse, though usually found on the pubis, is also encountered in the

axillæ, sternal region and beard, in the male, and in children, especially, upon the eyebrows and eyelashes. Crab lice are found either crawling about the hairs or adhering closely to the surface of the skin; their strong claws permit them to take such hold of the hairs that they are often detached only with difficulty. The ova are very much like those of the *pediculus capitis*, and are found firmly attached to the hairs.

They infest adults chiefly, and give rise to the same symptoms as the other pediculi. Although almost always contracted in sexual intercourse, yet they now and then find their way to the pubis of persons who are entirely unable to account for their presence. The amount of irritation caused by their presence varies with the individual; it is, as a general thing, comparatively slight.

Crab lice may be removed by the application of tincture of *cocculus indicus*, of full strength or diluted, or by any of the ointments or lotions used in the other forms of pediculosis. Mercurial ointment, the well known popular remedy, is no more effectual than the others, and makes a nasty mess. Its use, in general, is to be avoided, in favor of any of the other applications. Covering the pubis for a few moments with a cloth saturated with a small quantity of chloroform will kill all living crab lice instantly. The hair may then be washed with hot soapsuds, sponged with vinegar and combed. The sponging with vinegar may be continued once or twice daily for a week, to get rid of all nits. When patients will permit, shaving the pubis shortens the cure greatly.

Peliosis Rheumatica. (See *Purpura*.)

Pellagra. A disease occurring chiefly in Italy and some parts of eastern Europe, and supposed to be induced by eating spoiled corn, by malaria, etc. It is characterized by a chronic inflammation of the skin, of an erythematous character, accompanied by violent burning sensations and occasionally runs to blisters. It occurs chiefly on parts exposed to the sun, exposure to which is said to be the immediate exciting cause. The patient becomes debilitated, feverish, loses weight, and displays

various nervous symptoms, as vertigo, delirium, etc. The disease has not been met with in this country as yet, but the increasing Italian immigration makes it likely enough to turn up sooner or later. The treatment is to be directed against the general symptoms and condition of the patient, who, of course, should be placed under the best hygienic circumstances possible.

Pemphigus (*pēm'-fī-gūs*). Pemphigus is an acute or chronic inflammatory disease, characterized by the formation of a succession of irregularly-shaped blebs, varying in size from that of a pea to an egg. (See colored plate, Fig. D.) There are two varieties, *P. vulgaris* and *P. foliaceus*. In pemphigus vulgaris the disease may attack any part of the body, but is common upon the limbs. It may also attack the mucous membrane of the mouth and vagina. The lesions are blebs, from beginning to end, forming slowly, or sometimes rapidly in the course of a day. They may be few in number or quite numerous, and often vary greatly in size in the same case. They are tensely stretched, like bladders of liquid, and rise directly from the level of the skin, which is not usually reddened, and never elevated. No case should be called pemphigus, the bleb of which begins in the form of macules, or large papules. They are clear at first, with serous contents, but later are opaque, containing pus. They do not rupture spontaneously, but gradually dry up, each bleb lasting one to three or six days. The lesions are apt to come in crops; they do not burn or itch to any marked degree. In adults there is little or no disturbance of the general system. In children the disease is apt to be accompanied by feverishness.

In pemphigus foliaceus the blebs are flaccid and only partly filled with fluid, which seems rather to undermine the epidermis than to lift it into blebs. The lesions often coalesce, involving a large part of the surface; fresh lesions are continually forming; the fluid dries into thin, whitish flakes, which are cast off, leaving an excoriated, red surface, and presenting the appearance of a superficial scald. The disease may last for years and the patient finally succumb to exhaustion.

True pemphigus is a rare disease in this country; only 183 cases are reported in the 123,746 cases of skin disease of the American statistics. It is more common in children than in adults. Poor food and bad hygiene, pregnancy and menstrual disorders, mental depression, general debility and prostration, are among the causes. The disease is not contagious.

The diagnosis of pemphigus is usually not difficult. The presence of blebs does not necessarily indicate pemphigus, as these are developed in other diseases and by artificial means. (See *Dermatitis medicamentosa*.) So-called "pemphigoid" eruptions, obscure in origin and nature, are sometimes met with, but their course is not that of pemphigus, properly so-called. (See *Dermatitis herpetiformis*.) Pemphigus is not under any circumstances to be confounded with the bullous syphiloderm, formerly called "pemphigus syphiliticus." The latter is a purulent bleb, drying up into a thick crust, with a deep ulcer underneath. Erythema multiforme, in the bullous form, and impetigo contagiosa, are occasionally mistaken for pemphigus. A reference to these diseases under their respective titles will show their characteristic points.

The internal treatment of pemphigus is that which is most important. The general history and circumstances of the case must be looked into, and any defects of constitution or circumstance remedied. Among drugs, arsenic is most potent. Fowler's solution, in doses of four minims, thrice daily at first, rising gradually to the limit of tolerance, may be given. Wine of iron is the best excipient for Fowler's solution in these cases. Arsenic produces its effects slowly, and it should be persisted in for months, if necessary. Even then, a cure or even amelioration, may fail in so chronic and inveterate a disease. Quinine is of value, and in some cases linseed meal, in ounce doses, with milk, has proved valuable. Cod-liver oil and stimulants may be required at times. The patient should be allowed to rest, and should be free from worry and anxiety, so far as this is practicable.

Local treatment is also important. The blebs should be

punctured and evacuated as soon as they have formed. Soothing and astringent lotions, and especially dusting powders, as that composed of equal parts of oxide of zinc and starch, may be employed. Baths containing bran, starch or gelatine, may be employed in some cases. The continuous bath, in which the patient lives, eats and sleeps, for months, has been employed in severe cases. Occasionally, water does not agree, and in these cases mild ointments, as that of oxide of zinc or diachylon, or one of the pastes mentioned under eczema, may be prescribed.

Pemphigus runs an extremely uncertain course. Relapses frequently occur. When the blebs are numerous, flaccid, imperfectly formed, and inclined to rupture, and when they are rapidly and frequently formed, the prognosis is unfavorable. Repeated febrile attacks also indicate an unfavorable tendency. On the whole, then, we may say that the prognosis of pemphigus must be very guarded, as even when beginning as a slight attack, an unfavorable turn may be taken and the case end fatally.

Pemphigus, Syphiliticus, properly the bullous syphiloderm. (See *Syphilis of the skin*.)

Perforating Ulcer of the Foot is usually characterized by a small aperture, like the orifice of a sinus, in the centre of a large corn, which leads directly down by a narrow channel to exposed and diseased bone. Sometimes there are granulations around the orifice. The lesion is indolent, there is no pain, even on pressure, and little or no discharge. The ulcer is usually seated over the articulation of the metatarsal bone with the phalanx, generally over that of the first or the last toe. There may be several ulcers, and both feet may be affected. It is supposed to be due to nerve influence. Complete rest, even by the use of an artificial limb, is sometimes necessary to heal this rebellious disease.

Petechiæ are the small red spots, quickly changing to blue and livid tints, which characterize the eruption of purpura. (See *Purpura*.)

(See *Alopecia*.) Pityriasis of the scalp may be confounded with squamous eczema, psoriasis and some forms of seborrhœa, into which latter disease it sometimes merges. In eczema, however, the scalp is redder and more infiltrated, the scales are more scanty, and there is almost always either a history of weeping and oozing, or some characteristic lesions of eczema elsewhere. In psoriasis the scales are apt to have a yellowish tinge; the disease prevails more around the edge of the hairy scalp, and some characteristic patch of psoriasis is almost always to be seen elsewhere on the skin. In seborrhœa the oily element is prominent; the scales are matted together, yellowish and greasy, so that if they are laid on blotting paper a grease spot soon forms.

The treatment of pityriasis of the scalp is chiefly local. The scalp should be thoroughly cleansed by shampooing with soap and water, or if the scales are abundant, with *spiritus saponis kalinus*:—

R. Saponis viridis, $\frac{3}{4}$ ij
 Alcoholis, $\frac{3}{4}$ j. M.

Dissolve by the aid of heat, filter and perfume with oil of lavender.

This soapy wash is to be mixed with water and used as a shampoo. A teaspoonful with a tablespoonful or more of water rubbed into the scalp, with the addition of more warm water, will quickly work up into a fine lather that will cleanse the scalp effectually. So soon as this is washed out with pure water and the scalp dried, one of the following applications should be made. If the hair is thick, the following is preferable:—

R. Acid carbolic, $\frac{1}{2}$ j
 Alcoholis seu aq. cologniensis, $\frac{3}{4}$ iss
 Glycerini, $\frac{3}{4}$ iiss
 Ol. limonis, $\frac{3}{4}$ iss. M.

A few drops of this mixture are dropped here and there over the surface by means of a Barnes' dropper, such as is used for eye drops, and then well rubbed into the scalp with a stiff brush. As little as possible should be allowed to get into the hair, as it is easily made greasy by repeated applications. This and all applications, except the soapy wash, should be made daily, at

least at first. The spiritus saponis kalinus may be used every two days or every week, as may be necessary to keep down the accumulation of scales and the matting of hair by the oily applications.

When the hair is thin and short, ointments may be used, and the best of these, for ordinary use, is one containing sulphur:—

R. Sulphur. præcipitat., ʒj-ij
Ung. petrolii, ʒj. M.

Another ointment, very useful in these cases, is the following:—

R. Acidi tannici, ʒj
Ung. aquæ rosæ,
Ung. petrolii, āā ʒiv. M.

A certain number of cases do well under stimulant mercurial remedies, as this:—

R. Hydrarg. ammoniat., ʒj
Ung. petrolii, ʒj. M.

Now and then, but very rarely, tar is of use. Its odor and stickiness is, however, a serious objection to its use. The following formula will be found as convenient as any:—

R. Ol. cadini,
Ol. amygdalæ, āā ʒj
Aq. cologniensis, ʒvj. M.

Internal treatment is sometimes, but not by any means always, demanded. Tonics, and particularly iron, will be found useful. If there is constipation, with a tendency to anæmia, a not very uncommon combination in young persons suffering from pityriasis, the “mistura ferri acida” (given under eczema) will be found an efficient tonic aperient.

When an iron tonic alone is required, the following may be given:—

R. Tinct. ferri chlor.,
Acid. phosphoric., dil., āā fʒss
Syrupi limonis, fʒj. M.

SIG.—A teaspoonful, or less, in a wineglass of water, thrice daily.

Pills of the iodide of iron are also useful in some cases.

The prognosis of pityriasis capitis, in itself considered, is favorable, although some time may be necessary to effect a cure. Taken in hand early, before the hair has fallen much, the *defluvium capillorum* may be arrested. Little more can be hoped for than this, in the more favorable cases, and when "dandruff," with progressive baldness, has existed for some time, the hair cannot be made to grow again by any drug at present known.

Pityriasis Versicolor. (See *Tinea versicolor*.)

Plica Polonica (*plī'-kă pō-lōn'-ī-că*) is not a disease in itself, but is, practically, aggravated lousiness. It was formerly common in Poland and Austria, and occurred chiefly among the low and filthy inhabitants of that part of Europe. It consists in a matted and tangled condition of the long and neglected hair, glued together by discharges from the scalp irritated by lice. It is unknown in this country, because it requires a lifetime of assiduous cultivation of dirt and neglect to produce it. I have heard patients express the fear that they were victims of this disease, and have even heard the diagnosis made by physicians, but I venture to say that no case of true plica Polonica has ever occurred in this soap-and-water-ridden country, since the arrival of the settlers at Jamestown.

The treatment is simple in the cases of pediculosis capitis which are severe enough to be sometimes called by this name. The hair is to be cut short, if really necessary, parasiticide remedies applied (see *Pediculosis capitis*), and cleanliness enjoined.

Podelcoma. (See *Fungous Foot of India*.)

Poison Vine or Poison Oak Eruption. (See *Dermatitis venenata*.)

Pompholyx. (See *Dysidrosis*.)

Porcupine Disease. (See *Ichthyosis hystrix*.)

Porrigo. (See *Eczema* of the head.) *P. decalvans* (see *Alopecia areata*). *P. favosa* (see *Favus*).

Port-Wine Mark. (See *Nævus*.)

Prickly Heat. (See *Miliaria*.)

Prurigo. (*Prô-rî-gô*.) An excessively rare disease in this country, though occasionally met with in Europe. The American statistics show only 34 cases in 123,746 of all varieties of skin disease. It usually begins at an early age, within the first or second year, in the form of an urticaria, and commonly lasts through life. When developed it consists of firm, pin-head- to pea-sized elevations under and in the skin, usually discrete, but sometimes grouped. The color of the lesions is pale red, or like the surrounding skin; there are no scales. The disease usually first attacks the extensor surface of the lower extremities, particularly the tibiæ. The forearms are next invaded, and then the trunk. The head is rarely attacked; the palms and soles never. In severe cases buboes may form in the glands of the inguinal regions.

The eruption is accompanied by intense itching, and consequently blood crusts are always present, and in time the hairs are torn and rubbed off, and the skin becomes harsh, thickened and pigmented.

The life of the patient is one of untold misery, far surpassing, according to the accounts of European physicians, that to which any other disease gives rise, and suicide is the occasional recourse of the unfortunate victim.

The diagnosis of prurigo is not difficult, although cases of eczema are occasionally reported in the journals under this name, usually by physicians not conversant with skin diseases. The disease has a distinct and well-defined history, which prevents it from being mistaken for eczema. Eczema, indeed, often accompanies prurigo, being aroused by scratching or the application of remedies, but this can be cured by appropriate treatment, while the prurigo goes on, unaffected by treatment. Pruritus and pediculosis corporis used to be called prurigo, but the common consent of writers on skin diseases for the past fifteen years has confined the designation to the disease just described. There is no symptom but that of itching in common between these affections, and reference to the titles *Pruritus* and *Pedi-*

culosis corporis, in this work, will show how different are the symptoms.

The treatment of prurigo should be first directed to the general condition of the patient. The diet should be generous. Everything that will tend to improve the state of the patient's health is to be taken into consideration. Iron, arsenic, quinine, and especially cod-liver oil, may be prescribed. External remedies are particularly useful. Baths of various kinds, and also tar, naphthol and sulphur applications, are particularly to be mentioned.

The prognosis of prurigo is not very hopeful. It is said to be curable if treatment is commenced in childhood, but scarcely so in the adult. If a case is reported as having been easily cured, it is probably because a mistake has been made in diagnosis.

Prurigo Senilis. (See *Pruritus* and *Pediculosis corporis*.) The name prurigo was formerly given to the disease now known by these names.

Pruritus (*prô-rî-tûs*). Pruritus is a functional, cutaneous affection, manifesting itself solely by the presence of the sensation of itching, without structural alteration of the skin. The various forms of itching encountered in the course of many diseases of the skin, accompanied by organic changes, have been mentioned elsewhere, in connection with the diseases in which they occur. Pruritus, it must be remembered, is a distinct affection. The first thing that occurs is itching, and any lesion of the skin visible later is the result of the scratching to which this symptom gives rise. The feeling varies in different cases. Sometimes the patient describes it as being as if a piece of rough flannel were in contact with the skin. At other times it is said to be like the crawling of insects, or like a tingling sensation with the desire to scratch. It may be slight, or so severe as to be almost intolerable. It is most frequent in middle life and old age (the latter is one variety of the "prurigo senilis" of old writers, the other being lousiness).

The itching arouses an irresistible desire to scratch and rub, with the result that the surface is generally seen to be somewhat

roughened, hyperæmic and excoriated, in a slight or marked degree. In other cases the external signs are slight, so that were it not for the statement of the patient, the presence of any marked disorder might be doubted. The itching is usually intermittent, and is always worse at night. Pruritus rarely invades the whole body at one time, though various regions may in turn be attacked. In most cases it occurs in certain localities, and chiefly the trunk, scalp, genitalia and anus.

Pruritus vulvæ must not be confounded with other itching affections of the female genitals. The itching may be seated in the labia, vagina or clitoris, and is an exceedingly distressing affection. It is more apt to occur in middle or old age. In children it is often caused by the presence of ascarides in the rectum and about the anus.

Pruritus scroti is the form generally met with in the male. It may involve this region alone, or may extend along the perineum to the anus. The orifice of the urethra may also be the seat of the disease. The sensations are usually intensely annoying, and cause the patient to rub and scratch violently. It is worse at night, and is aggravated by warmth.

Pruritus ani occurs in both sexes, and in children as well as adults. The itching may be around the orifice or just within the rectum. In middle-aged or elderly persons it is very often associated with hemorrhoids. It is, if possible, more intolerable than any other of the local varieties. Sometimes it is constant, but more often it comes and goes from time to time, and is also worse at night.

The causes of pruritus are extremely varied, and it is important to keep this in mind, for the cause must, in most cases, be removed, in order to obtain a cure. It may be caused by physiological changes, as gestation, or by any irregularity of the menstrual function in young women. Occasionally, it is associated with hysteria, and it is sometimes met with at the climacteric period. Leucorrhœa is a common cause. Organic diseases of the uterus and ovaries are, at times, accompanied by it. Pruritus is likewise met with in many cases of jaundice, and is

sometimes a distressing symptom. Various diseases of the nervous system are accompanied by pruritus. Gastro-intestinal derangement, constipation, genito-urinary diseases, in both sexes, and, finally, the ingestion of certain medicines, and notably of opium, may give rise to the affection. It would hardly be necessary to add, were not the mistake so often made, that true pruritus is in no way caused by either vegetable or animal parasites. When these are present, it is by accident, or the disease is not pruritus.

The diagnosis of pruritus presents no difficulties. It is a disease of the skin, without any primary sign of alteration in its structure. Whatever lesions may be present are secondary, and the result of scratching, or of strong applications made by the patient. The diagnosis depends upon the patient's statement as to the subjective symptom of itching. Pruritus is most apt to be confounded with pediculosis, the secondary symptoms of the two diseases, scratch marks and excoriations, being similar. These, however, are more marked and definite in character in pediculosis. The finding of lice will settle the question. They are to be carefully looked for in the clothing, and every case of so-called pruritus should be suspected to be pediculosis until the absence of the parasite is demonstrated.

The treatment of pruritus is a matter demanding careful consideration and study in each individual case. A successful result will, in most cases, only be attained by recognition and removal of the cause. Constitutional and local remedies are both demanded. The internal remedies are to be directed against the cause, whatever the nature of this may prove. If constipation exists, the bowels are to be suitably regulated, salines being usually preferable. If there is flatulence or dyspepsia of any kind, such a diet is to be prescribed as shall overcome the digestive difficulty, and coarse, irritating and indigestible foods are, in all cases, to be avoided. Exercise and fresh air are beneficial. A sojourn at some mineral springs, particularly those of Saratoga or Richfield, may at times be recommended. At the former a course of the aperient waters, of which the Hathorn

is best, may be taken. In many cases, close attention to these details will be followed by the most gratifying results.

As regards drugs, the usual tonic and alterative medicines are to be employed. Irregular menstruation must be treated by the judicious use of iron or other remedies, cod-liver oil, etc. Quinia and strychnia are sometimes of use. Recourse may be had to bromide of potassium and chloral, alone or together, in order to subdue general nervous symptoms. Morphia should in no case be used, as it tends to aggravate the itching.

External treatment affords great relief, and is to be used in all cases. Cold and hot douches, used alternately, or hot water, applied as hot as it can be borne, or plain vapor baths are often useful. Medicated baths, containing three to six ounces of bicarbonate of sodium, or two to four ounces of carbonate of potassium or borax, to thirty gallons of water, will, at times, afford relief. Sulphuret of potassium and sulphur-vapor baths are sometimes used with success. Inunctions with a bland oil, as almond oil, may be practiced after these baths.

Lotions of various kinds are the most generally useful applications in pruritus, and those containing carbolic acid are, by far, the most generally efficient. Carbolic acid, in fact, is worth all the other remedies put together as an anti-pruritic, and should always be preferred, to begin with, unless some reason exists against its use. It may be employed in lotion, in the strength of five to twenty grains to the ounce of water, with a little glycerine. In the following lotion the anti-pruritic effect of potash is added to that of carbolic acid :—

R.	Acidi carbolici,	℥j
	Potassæ fusæ,	℥ss
	Aquæ,	f℥viij. M.

When other remedies fail, oil of peppermint may be applied, especially over circumscribed, itchy localities, avoiding the mucous and muco-cutaneous surfaces, where such applications are apt to give pain. Morphia in solution, one to three grains to the ounce; cyanide of potassium, fifteen to thirty grains to the pint; dilute hydrocyanic acid, from one to four drachms to the

pint; chloroform; chloroform and alcohol, a drachm to the pint; lead water; dilute ammonia water; dilute nitric acid, ten minims to the ounce of water, acetic acid or vinegar; chloral lotion, ten to thirty grains to the ounce of water, are all serviceable remedies, which may be tried singly or in succession in troublesome cases. "Liquor picis alkalinus," an alkaline solution of tar, the formula of which is given under eczema, is a most valuable remedy. It should be used at first in the strength of two or more drachms to the pint of water, gradually increasing.

In some localized forms of the disease ointments are to be used in preference to lotions; the following is a good one:—

R. Acidi carbolici, gr. x-xv
 Ung. zinci oxidi, $\frac{\text{ʒ}}{3}$. M.

The following is recommended in pruritus vulvæ (though ointments should rarely be used in this form of pruritus):—

R. Hydrarg. chlor. mite,
 Ext. belladonnæ, āā $\frac{\text{ʒ}}{3}$
 Ung. aquæ rosæ, $\frac{\text{ʒ}}{3}$. M.

The following is a good ointment, but not to be used on abraded surfaces, and only with caution on the muco-cutaneous surfaces:—

R. Camphoræ,
 Chloralis hydratis, āā $\frac{\text{ʒ}}{3}$
 Ung. aquæ rosæ, $\frac{\text{ʒ}}{3}$. M.

The camphor and chloral are to be rubbed together until fluid, and then added to the ointment. The mixture may also be used as a lotion with glycerine and water.

In pruritus of the female genital organs, water as hot as can be borne, sponged upon the parts, forms an admirable anæsthetic, and should be used in all cases, whatever other treatment is added. Sponging with hot water may be followed by the application of one of the following lotions: Carbolic lotion, as given above; decoction of tobacco, two drachms of the leaf to the pint; sulphurous acid; or, solution of alum in barley water. A lotion containing a drachm of the sulphite of sodium,

four drachms of water and an ounce of glycerine may be painted on. Sometimes emollient poultices, particularly a poultice of freshly-made almond meal, which evolves a small quantity of hydrocyanic acid, will be found very soothing.

Pruritus ani is generally best treated by means of ointments. One of the best of these is an ointment containing two drachms of tar to the ounce of cold cream. Another, composed of equal parts of belladonna and mercurial ointments, is to be applied on a pledget of lint. An oil, composed of one hundred grains of carbolic acid in an ounce of oil of sweet almonds, is a more agreeable application than those mentioned, and I think just as efficacious. The following formula, recommended by Dr. J. V. Shoemaker, I have found useful:—

R.	Sulphur. præcipitat.,	℥j	
	β Naphthol,	gr. x	
	Morphiæ sulphat.,	gr. ss	
	Bismuthi subnitrat.,	℥ ss	
	Ung. zinci ox.,	℥ ss.	M.

Penciling with oil of peppermint, pure or with an equal proportion of glycerine, may do in mild cases, where the patient does not scratch and tear the parts, but it cannot be employed where there are abrasions or fissures of the muco-cutaneous surface. Cocaine in ten per cent. solution gives temporary but complete relief. The application of any of these remedies should be preceded by sponging with very hot water.

In pruritus scroti the following prescription will be found useful:—

R.	Bismuthi subnitratis,	℥ ij	
	Acidi hydrocyanici, dil.,	f ℥ ij	
	Mist. amygdalæ,	f ℥ iv.	M.

In the pruritus of jaundice, mercurial ointment is said to be of value, also lotions of chloroform (one drachm to five of glycerine), cyanide of potassium (one drachm to the pint of water), and acetic acid baths or lotions in the strength of half a pint of the acid to three gallons of water, or about two quarts of strong vinegar to an ordinary thirty-gallon bath. I may say here that a solution of benzoic acid, alone or with an alkali, is known to

aid in the dispersion of bile pigment, and may, therefore, aid in the relief of this form of pruritus. I have not, as yet, had an opportunity to try this.

I cannot leave the discussion of this important subject, the treatment of one of the most painful and annoying of all diseases of the skin, without adding some general remarks, the result of my experience, not only in the treatment of pruritus, but also of other skin diseases of a chronic and stubborn nature. In all of these much depends upon the care and thoroughness with which the physician's directions regarding diet and regimen are carried out. To ensure this the directions themselves must be full and explicit. The patient's case must be made the subject of careful study; the exact diet suitable to the individual must be decided upon and enforced in such terms as to leave no doubt in the patient's mind as to the importance of every detail. Generalities in the way of directions, with a careless indication, in broad terms, of the articles of diet to be used and avoided, are not likely to produce a serious impression on the patient's mind, and the failure to amend is followed by a general despondency and distrust of all remedies.

The prognosis of pruritus should be guarded. The disorder, as a rule, is obstinate; often extremely so. The prognosis often depends largely upon the cause and our ability to remove it. The patient must be encouraged to persevere with and thoroughly carry out the treatment. In grave cases melancholic symptoms may be present. Occurring in the aged, the prospect of ultimate cure is poor. In middle-aged females, pruritus vulvæ is the commonest form met with; a most distressing malady and one which calls for every possible effort to ameliorate it on the part of the physician.

Pruritus Hiemalis, or winter pruritus, is a peculiar form of itching, dependent upon atmospheric influences and occurring chiefly in cold weather. It usually makes its appearance in October, and lasts until spring, being worse in clear, frosty weather, and disappearing at times, if the weather becomes warm and moist. It occurs chiefly on the inner surfaces of the thighs,

about the knees, the calves and the ankles. Most of the cases described lately as *Michigan itch*, *Prairie itch*, etc., are cases of pruritus hiemalis, though some are scabies, eczema, or urticaria. (See under these heads.) The affection may be relieved, but not usually cured. Emollient ointments, as vaseline and glycerine, with alkaline baths, give most relief. Occasionally the carbolic acid wash is useful. The under-garments should be soft and unirritating.

Psoriasis (*sō-rī'-ā-sis*). Psoriasis is a chronic disease of the skin, characterized by reddish, slightly elevated, dry, inflammatory patches, variable as to size, shape and number, covered with abundant, whitish or grayish mother-of-pearl colored, imbricated scales. The disease varies greatly in its extent and intensity in different cases, sometimes showing a typical development; in other cases represented by one or two obscure lesions. It possesses, almost invariably, however, certain characters which serve to identify it. The lesions begin as small, reddish spots, scarcely raised above the level of the skin, which almost immediately become covered with whitish, imbricated scales. They often develop rapidly, reaching the size of coins in a few weeks. At other times the course of the disease is more sluggish. The extent of the eruption varies greatly. A few patches may be all that are present, or the entire surface from head to foot may be involved, with scarcely a clear spot to be found. Commonly the disease shows itself in the form of variously-sized, scaly patches, scattered over different parts of the body. The patches are characteristic. They are usually rounded, sharply defined from the surrounding skin, and consist of a mass of imbricated, yellowish white scales on a red base. When the scales are picked off, a smooth, shiny, reddish surface is shown underneath, on which can be perceived a few pin-point-sized drops of blood. The abundance of the scales is a marked feature in some cases; where they are formed rapidly, that is, in well-developed cases the patient's bed may be filled in the morning with a handful of scales, which have accumulated during the night. When the disease exists about the joints, fissures may show themselves. *There is no watery*

discharge at any period of the disease. Sometimes the eruption takes on a highly inflammatory character, with redness, swelling and severe burning and itching, while at other times all these symptoms are much less marked, and, in fact, the patient would hardly be aware of the existence of the disease, except for its appearance. Though the individual patches of psoriasis may be small, and generally are so, yet they sometimes coalesce into hand-sized or larger patches, or may even cover the greater part of a limb.

Psoriasis may occur on any part of the body, but is most apt to be seen on the extensor surfaces of the limbs. It is sometimes found on the elbows and knees when it shows itself nowhere else. The back is more commonly attacked than the chest, and the scalp is a frequent seat of the disease. In the latter locality it sometimes occurs in patches, but more frequently as a diffuse and abundant scaliness. It is apt to extend a little beyond the border of the scalp, especially behind the ears and on the forehead, and this is quite characteristic. Psoriasis does not occur upon the mucous membranes. The so-called "psoriasis of the tongue" is an entirely different condition, related to cancer. Psoriasis is not contagious. In rare cases, as White has pointed out, psoriasis may degenerate into epithelioma.

The cause of psoriasis is not known. It is apt to occur in well-nourished, rosy-complexioned, light-haired people, the "picture of health," excepting that they are apt to be a little rheumatic. Now and then, however, it is met with in thin, worn persons, who are in poor health. Psoriasis rarely occurs in children, though Stelwagon has reported a case where it occurred in a child between three and four years of age. It rarely appears to be hereditary, but this tendency is occasionally met with. Some cases of psoriasis are worse in winter, and disappear almost or entirely in summer; others are worse in summer. Diet, I think, has usually little influence in causing the disease, though in some cases it may influence its course quite markedly. Psoriasis and syphilis are not connected in any way. There is a syphilitic eruption, sometimes called "syphilitic psoriasis,"

because the lesions resemble those of psoriasis. This most unhappy term has caused much confusion of mind, but it must be remembered that the cause, course and treatment of syphilis differ *in toto* from those of psoriasis. (See *Syphiloderma papulosum*.)

The diagnosis of psoriasis is easy when the affection is well-developed and presents its typical appearance. The form and aspect of the lesions, and the history of the case, will usually serve to determine its nature. Scanty and ill-developed eruptions of psoriasis are, however, at times, distinguished only with difficulty. Nevertheless, it is an important matter to accurately determine the nature of the disease, for its treatment is widely different from that of the affections with which it is liable to be confounded; its prognosis also is different, and in addition, two of the other affections are contagious.

Two or three small patches of psoriasis occurring alone, upon the arms or legs, may be mistaken for eczema. Itching, however, is always present in eczema, and therefore, itching is one sign that an eruption in question is not of this nature, though not a sure one, since psoriasis also sometimes itches.

In the majority of cases of eczema, there will be a history of moisture at some time. Psoriasis is always dry and scaly; never moist. The scales of psoriasis are more abundant, larger and whiter, than those of eczema. The patches of psoriasis are usually bold and well-defined in outline, while those of eczema fade into the surrounding skin.

Syphilis, in the form of the papulo-squamous syphiloderm, is very apt to be mistaken for psoriasis, and *vice versa*. Psoriasis, however, is more apt to be symmetrical in its distribution. It inclines to involve a large portion of the surface at once, or to be found in regions remotely separated, which the squamous syphilitic eruption rarely does. In psoriasis the lesions seem to be on the surface, so to speak. They are very scaly, but without much infiltration. The syphiloderm, on the other hand, is deeply indurated, and is only scantily covered with scales. In psoriasis the knees and elbows are apt to be involved. In syphilis these

are not often attacked. Occurring on the palms or soles, the disease is apt not to be psoriasis, which is very rare in this locality. The color, though often deceptive, sometimes aids in diagnosis. It is usually much lighter in psoriasis, while in syphilis it is apt to be a dusky, ham color. The age of the patient, and the duration of the disease, may give a clue to the diagnosis. Psoriasis generally first shows itself before the age of twenty; this form of syphilis later. The history of psoriasis is that of a chronic disease, lasting for years continuously, or in an intermittent manner. Syphilis rarely retains one form for any length of time. Other points in the history, infection, the occurrence of other lesions, etc., may come into use. Itching is rare in syphilis, common in psoriasis. Finally, the touchstone of treatment may be resorted to in very obscure cases.

Tinea circinata and psoriasis are sometimes mistaken for one another, but the patches of tinea are less inflammatory, red and infiltrated, and are much more superficial. The scales in tinea are larger and lighter, and the patches show no attempt at symmetry. The microscope shows the existence of a fungus in the scales of tinea circinata, which is absent in psoriasis, and a history of contagion may often be obtained in the former disease which is absent in the latter.

Psoriasis may occasionally be mistaken for seborrhoea, as this disease occurs on the chest and back; it may also be confounded with severe forms of lupus. A comparison of the description just given of psoriasis with that of the two former diseases, will show in what points the difference lies. Psoriasis may likewise be mistaken for lichen ruber planus, pityriasis rubra or lupus erythematosus. (See Table of Differential Diagnosis.)

DIFFERENTIAL DIAGNOSIS

BETWEEN

PSORIASIS.

1. Eruption terminates abruptly.
2. Scales thick and numerous.

SQUAMOUS ECZEMA.

1. Eruption fades gradually into surrounding skin.
2. Scales thin and scanty.

PSORIASIS.

3. Eruption always dry.
4. Eruption remains the same from week to week.
5. Scales large and pearl-like.
6. Itching less severe.
7. Smaller patches of eruption.
8. Seat of predilection on elbows, knees, etc.
9. Great uniformity of lesions.
10. Less induration but greater vascularity.
11. When affecting scalp, usually limited to hairy parts.

PSORIASIS.

1. Negative history.
2. No secondary lesions.
3. Symmetry of lesions.
4. Eruption very extensive.
5. Scales abundant and pearly white.
6. Covers most of body.
7. Knees and elbows generally attacked.
8. Lesions of bright red color.
9. Infiltration less marked.
10. Infiltration simply inflammatory.
11. Edges not raised after removing scales.
12. Scales loose.
13. Patches bleed when irritated or rubbed.
14. Severe itching.
15. No ulcerative tendency.

SQUAMOUS ECZEMA.

3. Presence of moisture at some stage.
4. Lesions change in character from time to time.
5. Scales small and yellowish.
6. Intense itching.
7. Patches of eruption large.
8. No seat of predilection.
9. No uniformity of lesions.
10. Great induration of patches.
11. Ears and face frequently attacked in eczema of the scalp.

SQUAMOUS SYPHILODERM.

1. History of syphilis.
2. Presence of secondary lesions.
3. No tendency to symmetry.
4. Eruption not usually extensive.
5. Scales scanty and transparent or gray.
6. Eruption usually limited in area.
7. Knees and elbows rarely affected.
8. Eruption ham-colored.
9. Skin markedly infiltrated.
10. Products of inflammation cellular.
11. Edges of patches raised.
12. Scales adherent.
13. Patches do not bleed easily.
14. Slight itching.
15. Patches have a tendency to ulceration.

DIFFERENTIAL DIAGNOSIS

BETWEEN THE PALMAR LESIONS OF

SYPHILIS.	PSORIASIS.	ECZEMA.
Often unilateral. Patches may be small and round; usually single and large, irregular outline; color coppery or purplish. <i>Macular looking.</i>	Eruption extremely rare. Usually bilateral. Patches small, round, scaly; no exudation, no cracking and thickening; color rather dark.	Usually bilateral. Patches large, sharply defined, much exudation, cracking; color light.
Always dry, deep fissures at times.	No discharge.	Serous, often bloody discharge from cracks.
No itching.	Seldom itch, and then not severely.	Very severe itching.
Made up of an aggregation of smaller patches.	Enlarges by peripheral augmentation of smaller patches.	Same as psoriasis in this respect.
Edges thicker than centre, covered with an overhanging scale.		Edges look as if cut or punched out.
Usually no cracking, but sometimes this is severe.		
History and other lesions chronic, rebellious to treatment.	Other lesions.	Other lesions, particularly on back of hands.
Almost always confined to adult age, and is result of acquired syphilis	Manifests itself in early life, usually before the age of 20.	
Once removed usually stays away.	Tends to recur through life at intervals.	
No tendency to form a definite pattern.	Definite pattern.	

PSORIASIS.

1. Intense itching.
2. Papules rounded and never umbilicated.
3. Desquamation from the start.
4. Marked desquamation.
5. Induration more marked.
6. Scales "mother of pearl" appearance.
7. Cause bleeding when detached.
8. Attacks extensor surfaces, elbows and knees.
9. Lesions rounded in shape.
10. Patches usually form.
11. Papules united lose their identity.
12. Lesions do not follow course of nerve distribution.

LICHEN RUBER PLANUS.

1. Slight itching.
2. Papules flat and often umbilicated.
3. No desquamation at first.
4. Slight desquamation.
5. Slight induration.
6. Scales grayish or yellowish.
7. No bleeding when detached.
8. Flexor surfaces usually attacked.
9. Lesions irregular or angular in outline.
10. Patches sometimes form.
11. Papules retain their individuality.
12. Lesions follow nerve trunks.

PSORIASIS.

1. Small portions of skin attacked.
2. Patches indurated.
3. Scales much less numerous.
4. Scales white and pearly.
5. Scales small.
6. Scales remain flat.
7. Pruritus well marked.
8. Inflammation deep seated.
9. Scales form less rapidly.
10. Frequently attacks children.

PITYRIASIS RUBRA.

1. Eruption invades most of the body.
2. Patches not thickened.
3. Scales very abundant.
4. Scales yellowish, thin and papery.
5. Scales usually very large.
6. Scales turn up when detached.
7. No itching.
8. Inflammation very superficial.
9. Scales reproduced very rapidly.
10. Disease of adults.

PSORIASIS.

1. Seat of predilection, elbows and knees.
2. Scales pearly white.
3. Scales abundant.
4. Scales readily removed.
5. Sebaceous glands normal.
6. Numerous patches of eruption.
7. Centre of lesions red and elevated.
8. Character and seat of eruption changes from time to time.

ERYTHEMATOUS LUPUS.

1. Usually occurs on face.
2. Scales yellowish or gray.
3. Scales scanty.
4. Scales firmly adherent to sebaceous glands.
5. Mouths of glands patulous.
6. But one or two patches of eruption.
7. Centre of patches paler and depressed.
8. Lesions run a regular course without change.

PSORIASIS.

1. Eruption occurs in irregular patches.
2. Scales large and flat.
3. Scales dry and pearly.
4. Skin red and inflamed.
5. Skin indurated.
6. Scales, when detached, often cause bleeding.
7. Seat of election on elbows and knees.

SEBORRHOEA.

1. Eruption diffuse.
2. Scales minute or caked.
3. Scales yellow and greasy.
4. Skin pale or pinkish under scales.
5. No induration.
6. Scales easily removed.
7. Lesions often confined to scalp.

PSORIASIS.

1. Non-parasitic affection.
2. Non-contagious.
3. Runs a chronic course.
4. Eruption circular, unusually annular.
5. Scales abundant and pearly.
6. Patches deep red and infiltrated.

TINEA CIRCINATA.

1. Parasitic disease.
2. Communicable.
3. Acute affection.
4. Lesion tends to become annular.
5. Scales shreddy and few.
6. Patches light red and not infiltrated.

PSORIASIS.

7. Frequent symmetry of arrangement in the lesions.

8. Often seen on knees and elbows.

TINEA CIRCINATA.

7. Patches not symmetrical.

8. Lesions occur about face and neck, or about groins and inside thighs.

The constitutional treatment of psoriasis, like that of eczema, should be based on a careful study of the history and habits of the patient. Attention should be given to the patient's general health and his condition, whether stout and well-nourished, or thin and delicate. Regard must be had also to any functional derangement. The history of the eruption itself must also be inquired into, as to its acuteness or chronicity, as to local and constitutional treatment which may have been previously employed, together with the effects of the same. In addition, inquiry should be made regarding the influence of the seasons, and whether the eruption is apt to disappear for a time and to break out again.

Fortified with this knowledge the medical treatment can be entered into intelligently. In the large majority of cases arsenic is preëminently the remedy. But, while arsenic is as near a specific as, in the nature of things, it is possible for any medicine to be, yet it must be employed judiciously if its good effects are to be obtained, or even if we do not wish to do harm. Arsenic should not, as a rule, be given where there is much gastric irritation, and it is hardly necessary to say that it should not be continued, should it disagree even slightly. The patient should be warned of its possible effects, and should be under the constant watch of the physician; on the first symptom of indigestion, pain in the stomach or bowels, or diarrhœa, the dose should be lessened or the use of the medicine suspended. Large or almost toxic doses do not hasten the cure of psoriasis; they sometimes even retard it by upsetting the stomach. Sometimes only a minute dose, as half a minim of Fowler's solution, is borne at first, when, later, tolerance is gained and a full dose given. Some patients need and will bear large doses of arsenic,

but this idiosyncrasy must be learned by careful, tentative increase of the dose, beginning always with a moderate one. Arsenic should not usually be given in acute and inflammatory forms of psoriasis. Arsenic acts slowly. When, in a case of psoriasis, it is going to do good, improvement generally begins to be shown after two or three weeks, but to get the full benefit of the drug it must be given for several months, and its administration should be continued for several months after the eruption has disappeared. *Liquor potassii arsenitis*, or Fowler's solution, is the best form in which to administer arsenic. It should never be administered in drops, as mistakes are likely to occur. It may be given in water alone, or in a bitter infusion or tincture, or with wine of iron :—

R. *Liq. potas. arsenit.*, ℥ij
Vini ferri, ad f℥iv. M.

SIG.—A teaspoonful in water, after meals.

The dose here is four minims—a fair average dose for an adult. The amount may be gradually increased, say every three days, until an effect upon the eruption becomes perceptible, or until the limit of tolerance is reached.

Sometimes it is desirable to give arsenic in pill form :—

R. *Pulv. acidi arseniosi*, gr. ij
Pulv. piperis nigræ,
Pulv. glycyrrhizæ rad., . . . aa . . . ℥ij. M.
Fiat pil. No. xl.

SIG.—One after meals.

Or occasionally powders may be preferred :—

R. *Pulv. acidi arseniosi*, gr. ij
Pulv. sacch. lactis, gr. cl. M.
Fiat chart. No. xl.

SIG.—One immediately after meals.

But neither pills nor powders are as effective as Fowler's solution, and I rarely prescribe them unless forced by circumstances to do so.

Some cases of psoriasis require tonics, evidently, from the appearance of the patients ; others will be found, on experience,

to demand such treatment. Tincture of the chloride of iron is the best medicine to use in those meagre, worn-looking persons, as nursing mothers when the attack has come on during lactation. Next to iron in value is cod-liver oil, and these remedies occasionally succeed when arsenic fails. In acute inflammatory cases diuretics are occasionally of service. Acetate of potassium, in half-drachm doses, may be given three or four times a day, in a wineglass of water. The alkaline mineral waters are also of service. Iodide of potassium has of late been highly lauded. I have tried it repeatedly without gaining any benefit whatever. Other drugs have been administered in psoriasis, but I think that those just mentioned will be found sufficient.

The local treatment of psoriasis is of more or less importance, according to the nature of the case. When the lesions are few, small and widely disseminated, and there are no disagreeable subjective symptoms, local treatment is inconvenient and need not be employed. When, however, there are a few large patches, or when the eruption is situated on some conspicuous part of the person, or gives rise to annoying burning or itching, local treatment is required and will be found advantageous. If there are scales, these should be first removed by rubbing with *sapo-viridis* and hot water, or by the use of a hot-water bath. If the patches are few in number, large and very scaly, the following solution, well rubbed in, will remove the scales readily and give an opportunity for making healing applications:—

R. *Acidi salicylici*, $\mathfrak{z}\text{j}$
Alcoholis, $\text{f}\frac{\mathfrak{z}}{\text{iv}}$ M.

This is especially useful on the scalp, when, after the scales have been cleansed off by this means or by means of *spiritus saponis kalini* (two parts of *sapo viridis* dissolved in one part of hot alcohol and filtered) used as a shampoo, an oil composed of one drachm of oil of cade to the ounce of oil of almonds or of alcohol may be well rubbed in by the aid of a soft tooth brush. On the edge of the scalp and about the face the best ointment is that of ammoniated mercury, twenty to forty grains to the ounce.

When it is desirable to get rid of the scales and patches in the most rapid manner possible chrysarobin (chrysophanic acid) is the best application. An ointment of half a drachm to a drachm to the ounce is very efficient, and will remove a patch in a few days, leaving a white spot of skin surrounded by a purplish areola in its place. But there are strong objections to the use of chrysarobin. It discolors everything with which it comes in contact, dyes the hair orange-yellow, and ruins the clothes. It cannot be used on the scalp, nor about the eyes and cheeks, because it gets up a sort of erysipelas there, and it cannot be trusted in the hands of most patients, because, unless used cautiously, it may inflame the skin wherever used. G. H. Fox has suggested the following solution, which is quite effectual and saves the smearing which renders the chrysarobin ointments so annoying and disagreeable :—

R. Chrysarobin,	3j
Ætheris et, alcoholis, . . . aa . . .	q. s.
Collodii,	℥j. M.

Rub up the chrysarobin with a little alcohol and ether, and add to the collodion. It forms a sort of emulsion, which should be shaken before using. By the aid of a camel's-hair pencil in the cork, this may be painted over the affected patches after removal of the scales. When it dries, it will not come off on the clothes, a great advantage.

Next to chrysarobin in activity comes pyrogallic acid. This may be used in ointment—a drachm to the ounce. It is not so effectual, but is much more cleanly, although it leaves a blackish stain. I think it the best local application for psoriasis. The only caution to be observed is, not to rub it over a large area, say a quarter of the surface of the person, at any one time, for fear of absorption.

Preparations of tar have been used from time immemorial in the treatment of psoriasis, but I think the remedies above mentioned are better, and they are certainly much more agreeable. When there is a good deal of itching, however, tar may be used,

either as an ointment, of one to two drachms to the ounce, or in the following formula:—

R. Saponis viridis,
Picis liquidæ,
Alcoholis, aa ℥iv. M.

This is to be rubbed firmly into the patches, previously denuded of scales, twice daily. Hebra's modification of Wilkinson's ointment, given under Eczema, is useful.

In very severe and extensive, or universal psoriasis, baths with inunctions of bland oils and fats are better than any of the applications mentioned. Tar may be used in these cases with caution.

The prognosis of psoriasis, so far as the individual attack is concerned, is, in medium and mild cases, usually favorable. But the disease is prone to relapse, and the physician should warn his patient that, while the attack can be cured, the affection is liable to return, and that no treatment, however well directed, will surely prevent the disease from coming back. Severe cases, especially when the entire surface is covered with the disease, are often rebellious to all treatment.

Purpura (*per'-pū-rā*). Purpura is an affection of the skin, characterized by the appearance of hemorrhagic spots of various sizes, and accompanied or not by similar hemorrhages in the mucous membranes and viscera. It may be idiopathic or symptomatic. The idiopathic form commonly presents itself in two varieties, *P. simplex* and *P. hæmorrhagica*. Purpura simplex is characterized by the appearance, in successive crops, of numerous petechial spots in the skin and visible mucous surfaces. These are usually attended with little or no constitutional disturbance, although malaise, loss of appetite, etc., may precede the outbreak of the eruption by some days. The spots come out suddenly, often in the night, and the patient finds his skin, usually the legs and about the knees, strewn with the sharply-defined, pin-head to pea-sized hemorrhagic lesions. The color of the eruption, at first bright red, soon becomes purplish, and the lesions may be single and scattered, or here and there mingled

in irregular patches. The only subjective symptom observed is slight itching on the appearance of the lesions; often even this is absent. Occasionally wheals, like those of urticaria, occur with the hemorrhages, and then there may be much itching. Blebs have been noticed in this form of purpura.

Purpura simplex is more frequently observed in the old than in the young. An attack may last from a fortnight to several months, the cutaneous lesions coming out in crops. The causes are often obscure; it occurs in the well-nourished as well as the debilitated. Malarial influences also have an effect in causing the disease.

The lesions of purpura simplex are so peculiar, being small hemorrhages under the skin which do not disappear on pressure, that there is usually no difficulty in making a diagnosis. The lesions may, however, be confounded with flea-bites. The puncture made by the insect in the centre of each hemorrhagic point will, however, settle the diagnosis.

There is one form of purpura simplex which is known as "*P. rheumatica*," where the prodromal symptoms are more severe, and where severe rheumatic pains are felt, especially in the joints of the lower limbs. When the eruption comes out the rheumatic symptoms abate; relapses here are common; the disease may last for months, and sometimes takes on the appearance of erythema multiforme.

The second variety of idiopathic purpura, *P. hæmorrhagica*, is a much more severe disease. It begins by marked prodromal symptoms, as debility, loss of appetite, languor, headache, and feelings of general distress. The spots of eruption appear suddenly, first upon the limbs and then spreading to other parts of the body, occurring usually in great numbers and often coalescing to form hand-sized patches. Hemorrhages from the mouth, gums, nose, stomach, bowels and bladder, and even into the brain, may occur simultaneously and the disease may have a fatal termination. The disease may occur at all ages and among the strong and well nourished as well as among the weak and ill-fed.

Purpura hæmorrhagica is liable to be confounded with scurvy, but scurvy occurs in those who have been subjected to bad food and improper hygiene. P. hæmorrhagica comes on suddenly, scurvy comes on slowly, with tumefaction of the gums, bleeding and looseness of the teeth, etc.

The symptomatic forms of purpura are those in which the hemorrhage into the skin is a comparatively insignificant symptom of a more important disease. The specific fevers, various forms of anæmia, leucocythemia and scurvy form one group of these. Another is formed of cases where the extravasation of blood into the skin is caused by the ingestion of drugs. (See *Dermatitis medicamentosa*.) A third group includes cases occurring from mechanical causes, as feeble circulation, varicose veins, thrombosis, etc. A fourth group includes all those cases in which the nervous system is primarily at fault, as tabetic purpura, purpura in connection with diseases of the central nervous system and neuralgia, etc.

In the treatment of purpura, attention must first be paid to the removal of the cause, if this can be ascertained. Nutritious diet, and above all, if the hemorrhage be extensive, perfect rest in the horizontal position, are important. In purpura simplex, ergot, iron and quinine, the mineral acids, together with frictions and cold baths are beneficial. Purpura hæmorrhagica calls for prompt and decided treatment. In addition to perfect rest and diet in ordinary cases, tincture of the chloride of iron in doses of twenty to thirty drops, alone or with ergot and digitalis, may be given. Turpentine and acetate of lead, with opium, may be administered in some cases. Oil of erigeron, in five to ten-drop doses, on sugar, every two to four hours, is highly recommended. In severe cases ergotine may be given hypodermically, one grain every four hours. Electricity has succeeded when other remedies have failed. Finney recommends ergot and belladonna at first, and bark, ammonia, and the mineral acids later.

The prognosis of all forms of purpura, except purpura hæmorrhagica, is good. The disease is apt to be stubborn to treatment,

however, *P. rheumatica* particularly so. The latter is a treacherous disease, and the prognosis should be guarded.

Closely connected with purpura is the hemorrhagic condition, known as "bloody sweat," or "hæmatidrosis," which consists in the appearance at the outlets of the excretory ducts of the sweat glands, of a reddish fluid containing blood. It is usually in small quantity and localized, and is a cutaneous hemorrhage, taking place about the sweat glands, and emptying itself through the sweat ducts. It is a very rare disease. (See *Hæmatidrosis*.)

Pustule, Malignant. (See *Malignant Pustule*.)

Quinine Eruption. (See *Dermatitis medicamentosa*.)

Red Gum. (See *Miliaria*.)

Rhus Poisoning. (See *Dermatitis venenata*.)

Ring Worm. (See *Tinea circinata*, *T. tonsurans* and *T. sycosis*.)

Rodent Ulcer. (See *Epithelioma*.)

Rubella (*Rötheln*, *German Measles*). A febrile exanthem, the eruption of which is sometimes mistaken for skin eruptions of other kinds or for other exanthemata. The differential diagnosis here given will aid in distinguishing the affections.*

* This table is taken from an article on the subject by Dr. J. H. Etheridge. He remarks that the salient points of difference between *rötheln* and the two diseases with which it is liable to be confounded are: 1st. *The temperature*. 2d. *In the mode of appearance of the eruption*. 3d. *The characteristic elevation and heightened color of the centre of the patches*. 4th. *The manner of desquamation*.

DIFFERENTIAL DIAGNOSIS

BETWEEN

RUBELLA (*Rötheln*).*1st stage. Invasion symptoms.*

Slight languor, with headache and sometimes nausea and vomiting. In one case clonic convulsions.

J. L. Smith.

Shivering, nausea, rarely vomiting, itching, redness and pain of eyes with increased lachrymation, sneezing and discharge from nose, cough, sore throat and hoarseness. (In addition to above.)

Aitken.

Pain in limbs, more or less. (In addition to above.)

Living.

Sore throat is a most constant symptom, and is a characteristic feature of the disease, occurring in the slightest and most gentle cases.

Patterson.

There is usually sore throat.

Dunlap.

In all cases there is sore throat.

Murchison.

DURATION.

Eruption appears on 1st or 2d day, usually on 2d day.

Living, Murchison.

Appears on 3d or 4th day.

Aitken, Roberts.

Appears on 5th day.

Fox.

Some hours, or a day, or even longer duration.

J. L. Smith.

2d stage. Stage of eruption.

MODE OF APPEARANCE.

The eruption appears all at once over the whole body; is sudden and general; is less marked on the limbs than trunk. *Aitken, Roberts, Fox, Copeland.*

May first appear upon the back, upon the chest or neck, upon the cheek or upon the forehead; travels downward. *J. L. Smith.*

SCARLATINA.

1st stage. Invasion symptoms.

Chill, vomiting, epistaxis. The fever, increased heat of skin, headache, prostration, and general malaise vary much in intensity, not including cases of unusual severity.

MEASLES.

1st stage. Invasion symptoms.

Lassitude, shivering, fever, catarrh. The mucous membrane of the eyes, throat, windpipe and bronchial tubes are much affected. Eyes watery, lids puffy; dry cough; hoarseness and difficulty in breathing; drowsiness; great heat of skin; frequent and hard pulse.

DURATION.

Average duration, 24 hours. Eruption usually appears on 2d day (*i. e.* at any hour after 24th hour of sickness). Exceptionally, it appears, on the one hand, a few hours after the attack, and on the other hand, it may be delayed 1, 2, or 3 days or more, after the time when it usually appears.

Flint.

2d stage. Stage of eruption.

MODE OF APPEARANCE.

Usually appears on body and limbs before it comes out on face and neck. In exceptional cases it appears first on latter situations.

DURATION.

Eruption appears on 4th day—seldom earlier—often later.

Tanner.

2d stage. Stage of eruption.

MODE OF APPEARANCE.

First appears on forehead and face, and gradually extends down over body, legs and arms.

RUBELLA (*Rötheln*).

2d stage. Stage of eruption.

CHARACTER OF ERUPTION.

At first like measles; minute dots, which rapidly assume the appearance of large, irregular-shaped patches, varying from 3-cent piece to 25-cent piece in size. *Aitken, Living, Murchison, Roberts.*

These patches quickly become raised above the surrounding skin, especially toward the centre of the patch, and are of a darker color at the centres.

Aitken, Roberts, Fox.

These patches shade off in color toward the margins till the natural color is reached between the patches. *Aitken.*

The more severe the case the more is the centre of the patches elevated above the surrounding skin.

Aitken.

After a time the patches may all unite, and then the skin becomes to the naked eye of a uniform red color, closely resembling scarlet fever. *Murchison.*

In two cases out of five this uniform red color was noticed.

Living.

DURATION.

Eruption disappeared in 3 to 4 days. *Dunlop.*

In proportion to severity: 4-10 days.

Murchison, Aitken.

From 7 to 10 days.

Living.

In no case (of more than 21 reported cases) lasting more than 8 hours.

Steiner, of Prague.

Usually fades in 4 or 5 days.

Roberts.

Fades out 2d or 3d day,

Fox.

Commonly disappeared the 4th day.

J. Lewis Smith.

SCARLATINA.

2d stage. Stage of eruption.

CHARACTER OF ERUPTION.

First appearance is in form of dots or specks. These coalesce, forming irregularly distributed patches, which vary in shape and size, having irregular or serrated margins. In some cases the whole cutaneous surface is covered with efflorescence, presenting the appearance of a boiled lobster. *Flint.*

Amount of eruption varies very greatly, varying all the way from slightest possible amount to a bright scarlet hue of the entire surface of the body. No elevation of skin answering to "centre of patches" is ever noticed. No elevation farther than what we call "goose skin" is ever seen.

MEASLES.

2d stage. Stage of eruption.

CHARACTER OF ERUPTION.

Comes out in small circular dots like flea-bites. These dots run together and form blotches of a raspberry color, and the latter are very prone to assume a crescentic or horseshoe shape, being slightly elevated above the surrounding skin.

Eruption sometimes diffused over whole body in a confluent form, and is of a dull, deep red color, offering a contrast to the crimson or scarlet redness of scarlet fever. *Flint.*

DURATION.

Eruption reaches its maximum of intensity and diffusion on third day after its first appearance. This stage varies from four to six days. Eruption usually gone at end of 5th day. In some cases it persists a day or two longer.

DURATION.

Begins to fade about the fourth day in the same order in which it came out.

RUBELLA (*Rötheln*).

2d stage. *Stage of eruption.*

ACCOMPANIMENTS.

Sore throat is always a prominent and troublesome symptom in this stage. This fact is *particularly* emphasized by *Aitken*, *Living*, *Murchison*, *Patterson*, *Copeland*.

In severe cases the hoarseness is so great as frequently to cause entire loss of voice. * * * * Swelling accompanies this hoarseness, and is so great that there is a total inability to swallow even the slightest portion of fluid, which generally regurgitates by the nose. *Aitken*.

Mild inflammation of mucous membrane of throat, mouth, nose and eyes. *J. L. Smith*.

There is a combination of scarlatinous angina (sore throat) and tongue, with morbillous (measles) catarrh. *Murchison*.

The temperature being always highest on first day of attack, not exceeding 102° , next day falling to 100° , and getting normal on 5th day. *Fox*.

The temperature nearly always *subfebrile* (99.5 to 100.4°), sometimes *febrile* (101.3 to 102.2°). *Wunderlich*.

There is scarcely any constitutional disturbance, and the temperature is only slightly, if at all, raised above the normal standard. *Dunlop*.

Slight, if any, rise in temperature. *Steiner*.

Febrile movement, constantly mild in uncomplicated cases, ranging from 98° to 100° . *J. L. Smith*.

SCARLATINA.

2d stage. *Stage of eruption.*

ACCOMPANIMENTS.

Very numerous. Many of them present in a certain proportion of cases, then again they are all wanting. They vary widely in their dangerousness, some being surely fatal, others being quite innocuous. There may be sore throat, varying from a little redness to a destructive degree of inflammation. Watery blebs or blisters sometimes appear on the skin. Fever rather increases after the eruption. Temperature may reach 105.6° , or even a higher point. It usually remains continuously high during the eruption (*Wunderlich*), and is thus well distinguished from those eruptions with which, on account of other symptoms, it is most easily confounded, and more particularly measles and *rötheln*.

Pulse may go to 160 or even 170.

No appetite. Sometimes vomiting, constipation in some cases, diarrhoea in others; thirst urgent; delirium common; integument slightly swollen all over, as is shown when patient tries to close the hand.

MEASLES.

2d stage. *Stage of eruption.*

ACCOMPANIMENTS.

Irritability of the mucous membrane all over the body seems to be a characteristic of measles. Hence bronchitis is almost the rule in this stage.

Redness of the eyes is a constant symptom, amounting to inflammation in some cases.

Temperature for *one* day in this stage in uncomplicated cases will rise to 106° . It then rapidly subsides to the normal standard, reaching it in 48 hours.

RUBELLA (Rötheln).*3d stage. Desquamation.***CHARACTER OF THE SCALES.**

Minute portions of cuticle, like *fine bran*.

Always begins toward centre of eruptive patch and gradually extends to the circumference. *Roberts, Aitken, Murchison, Living, Patterson, Dunlop.*

Scales on hands and feet are larger, but never reach the size of those of scarlet fever. *Patterson.*

DURATION.

5 days to 12 or 15 days.

SCARLATINA.*3d stage. Desquamation.***CHARACTER OF THE SCALES.**

Comes off in branny scales and in large patches, occasionally epidermis of hands is detached entire and may be stripped off like a glove. This is true also of the feet. *Flint.*

Sometimes several successive desquamations occur.

Frequently accompanied with itching, which in some cases is excessive.

DURATION.

Desquamation usually completed in 10 to 12 days; exceptionally it continues for several weeks.

MEASLES.*3d stage. Desquamation.***CHARACTER OF THE SCALES.**

Always in branny scales, not in patches or flakes.

DURATION.

From 4 to 8 days.

Rupia. (See *Syphilis of the Skin.*)

Sapo Viridis, a soft soap, made originally of herring fat and potassa, and containing about three per cent. of caustic potassa. The genuine soap comes from Stuttgart, in Germany, but I think there must have been some change made in the fatty constituents of late years, as it does not smell, by any means, so disagreeably as it used.

Sarcoma of the Skin appears in the form of shot, pea, hazel-nut, or larger sized, variously shaped, discrete, non-pigmented or pigmented tubercles, or tumors. Non-pigmented tumors, occurring as single or multiple growths upon the various regions, represent, perhaps, the commonest manifestations of the disease. They are smooth, firm, elastic, not markedly painful upon pressure; in color, reddish, violaceous, or brownish red. It is said that the multiple pigmented sarcoma always appears first upon the soles and backs of the feet. The disease may be mistaken for the papular or for the gummatous syphiloderm, lupus and lepra. It occurs generally toward middle age. The disease is malignant, usually proving fatal in the course of a few years. Recently, hypodermic injections of Fowler's solution, in the dose of two drops, gradually increased to nine drops, diluted with two parts distilled water, daily, have been used successfully. This is worth a trial, for no other treatment avails.

Scabies. Scabies, or the itch, is a contagious, animal parasitic disease, a sort of eczema or dermatitis, caused by the presence of an animalcule, the itch mite, in the skin. It is highly contagious. The female itch mite no sooner finds itself on the skin than it begins the work of burrowing, forming, just below the surface of the skin, a burrow in which the eggs are laid, the fæces deposited, and in which the itch mite lives. The male is said never to enter the skin, but to live upon the surface. After a time, a certain number of young itch mites are hatched forth, all of which begin at once to take care of themselves, and to burrow. Thus, the early symptoms of the disease are caused by the irritating presence of these parasites at various points, and characterized by the formation of minute, more or less inflammatory, puncta, papules and vesicles. Later, the burrows can be seen in the shape of more or less tortuous, beaded, yellowish or blackish lines, not thicker than a thread, and one-eighth to one-quarter of an inch in length. Later still, scratch marks, blood crusts, etc., show themselves, and the disease spreads day by day.

The affection usually begins about the hands, and especially about the fingers. The wrists, the penis in men, and in women the mammæ, are next involved. The other softer and more protected parts of the body are then invaded. The anterior fold of the axillæ and the buttocks are very apt to be attacked. The lower limbs are generally spared, excepting the feet in children.

Itching, oftentimes very severe, is a marked feature of the disease, increasing in severity with its extension. It is worse at night, when the patient is warm in bed.

The cause of scabies lies, as has been said, in the irritating presence of the itch mite in the skin. It is so contagious that it may be conveyed by bedding or clothes, or even by a shake of the hand. It is not a common disease in this country, occurring only in the proportion of one per cent. among all skin diseases, being led in frequency by eczema, thirty-one per cent. ; syphilis, ten per cent. ; acne, seven per cent. ; psoriasis, between three and four per cent. ; and various others. In Europe, on the

other hand, the unwashed populations furnish a larger proportion of scabies than of any other skin disease. The recent increased immigration of Italians, Poles, etc., has increased the proportion of scabies in public clinics in our large cities.

The diagnosis of scabies is, as a rule, not difficult. The presence of the burrow is sufficient to decide the matter, and this should be looked for in every suspected case. The mite itself may usually be extracted from the minute vesicle at the end of the burrow by the aid of the point of a pin or needle, but failure to capture it need not be regarded as negative evidence in the diagnosis, for it requires a good light, sharp eyes and some dexterity to succeed. The burrows must not be confounded with irregular lines of epidermis filled with dust or dirt. The resemblance is at first sight strong. In the majority of cases the burrows are only to be detected upon the sides of the fingers, or on the flexor surface of the wrists. The regions of the body mentioned as the favorite seat of scabies must be taken into consideration in making the diagnosis, and finally, it must be remembered that other affections may be concurrent with scabies upon the body.

Once recognized, the disease is, in most cases, easily cured. The great point is to use the applications in such a manner that the parasite may be destroyed without undue irritation of the skin, and, indeed, with relief to this condition. When the case is recent a cure can be rapidly and easily effected, but when of old standing there is apt to be a good deal of eczema in connection with the scabies, and after the parasite is destroyed the eczema remains for treatment. The following ointment seems to cure the eczema while killing the itch mite:—

R. Pulv. naphthol, $\overline{3}$ j
Ung. adipis, $\overline{3}$ j. M.

On coarse skins *sapo viridis* may be used with the naphthol:—

R. Pulv. naphthol, $\overline{3}$ iss
Saponis viridis, $\overline{3}$ v
Cretæ alb. pulv., $\overline{3}$ j
Axungiae, $\overline{3}$ x. M.

I have used one or another of these prescriptions almost exclusively, for several years past, and prefer them above all others. Sulphur is the old standard remedy, and may be used in the form of ointment, ranging in strength from one to four drachms to the ounce, according to the tenderness of the skin. The modified Wilkinson's ointment given under Eczema is also useful.

The treatment, whatever it be, should be preceded by a hot bath with soft soap, after which the ointment should be rubbed in, and allowed to remain. After seven days of treatment, an inunction being made daily, and the under-clothing remaining unchanged, the patient should bathe and report for inspection. Too vigorous a course of treatment may give rise to a dermatitis, which will require weeks to cure.

The prognosis of scabies is always favorable; a few weeks will suffice in average cases, but the irritation of the skin requires longer treatment to overcome.

The "army itch," frequently encountered during and after the late war, was a severe form of scabies.

Sclerema Neonatorum. This rare affection is in no way connected with scleroderma, although the latter was at one time called "sclerema of adults." It usually shows itself in the first days of extra-uterine life, having in all probability begun in foetal life.

The first marked symptoms are commonly observed from the third to the sixth day after birth, when the lower extremities are seen to show considerable areas of shining, tense, white skin, sometimes tinged with red, or of a dirty-brown or yellowish color. The tissues are oedematous, pitting on pressure with the finger, while the skin is so much thickened that it cannot be pinched into folds between the thumb and fingers. Beginning in the calf, the disease soon extends to the thigh, spreads over the abdomen, up the trunk, involves the head and upper extremities, and, in fine, after a brief period (three hours to three days) invades the entire body. Of course, we can know nothing of the subjective symptoms, but the rapid fall in body temperature,

the frigidity of the affected parts, and the general depression of functional activity, point to a serious general condition.

The infant's bodily movements are imperfect and restrained; it lies numb and stiff, usually with closed eyes and wrapped in lethargic slumber; it declines food, partly on account of mental hebetude and partly because of the difficulty of making the movements of the mouth necessary to nursing. The heart is weak, and the pulse is rapid and sometimes almost imperceptible. The respirations are irregular and shallow, with occasional râles. The patient occasionally utters a complaining whine. The urine and stools are diminished in quantity.

The symptoms mentioned usually increase in severity with continually falling bodily temperature and increasing weakness, until death ends the scene at the end of from four to ten days.

Sclerema neonatorum is almost invariably fatal, though recovery has been noted in a few cases where the disease was not extensive. The cause of the disease seems to lie in an extensive implication of the blood vessels. Atelectasis of the lungs, congenital disease of the heart, or other constitutional anomalies, have been brought forward as explanatory of the origin of the disease. Surrounding and pre-natal conditions of an unfavorable hygienic character—want, privation, etc.—appear to have some influence in the causation of the disease.

Anatomical examination shows deep involvement of all strata of the cutaneous envelope. The widespread infiltration of the subcutaneous tissues allows the easy separation of these layers from the deeper layers of muscles and the fasciæ. On section, a yellowish-white, serous fluid, mostly composed of oil globules, exudes. Of the internal organs, the lungs and kidneys are usually hyperæmic, while the brain and the serous membranes are usually cedematous. The brief duration of the affection, however, usually allows only the earlier stages of these changes to be observed.

The treatment of sclerema neonatorum is of a roborant and restorative nature, and should be undertaken at the earliest possible moment. Rubbing with hot blankets, etc., and the internal administration of restoratives may relieve the patient, and, if

begun in time, may work a cure. The affection is very rare. I do not know of any case having been reported in this country.

Scleroderma. An affection of the skin chiefly characterized by changes in the color and density of the integument, and in some cases accompanied by marked deformity.

Two varieties are usually described, *Scleroderma diffusa* and *Scleroderma localis*.

Scleroderma diffusa. This is the affection described first, under the name of *sclèrémie des adultes*, by Alibert, in 1817. The affection occurs most commonly in women and in adult life. No previous ailment seems to exercise a predisposing influence, unless it be rheumatism. The immediate cause in many cases has been exposure to dampness and cold.

The induration, which is so marked a symptom of the affection under consideration, is variously described in different cases, and writers seem to vie with one another in their attempts to express vividly the peculiar sensations offered to the sight and touch.

In some cases the skin is described as being of stony or board-like hardness, or feeling like that of a frozen corpse, without the sensation of cold. In other cases it is compared to brawn or leather. Adherence of the skin to subjacent tissue is not uncommon—"hide bound," or "perfectly immovable," are the expressions used. In a case coming under the writer's personal observation, the skin over the forearms was so bound down that the limbs seemed as if carved out of wood. The underlying muscles, particularly those of the limbs, are generally more or less wasted.

One of the most distinctive characteristics of this variety of scleroderma is symmetry and diffusion as distinguished from localization. Commencing, as in most of the cases reported, on the back of the neck, the disease spreads equally on either side of the median line; or, when it begins in the limbs, both are usually attacked at once.

The surface covered is almost invariably large; those cases

reported in which the disease seems to tend toward localization, are usually to be regarded as, in all probability, belonging to the other variety of the disease.

A marked characteristic of this variety of scleroderma is that no distinct boundary exists to the affected areas ; they seem to melt imperceptibly into the surrounding skin.

The color of the affected skin varies much in different cases. In many cases pigmentation exists to various degrees, while in other cases the skin either retains its normal tint, or becomes pale-yellowish or waxy in color. A curious fact is that the pigmentation seems much deeper in the immediate neighborhood of the sebaceous follicles. In a certain number of cases, it is said that spots or patches of pigmentation at various points precede and presage the induration of the skin in these localities. This, however, is more likely to occur in the circumscribed and localized form of scleroderma.

Neither fever nor local inflammatory reaction of any kind ushers in, accompanies, or follows the appearance of the disease in any typical case. Œdema is rarely, if ever, observed in diffuse scleroderma. Occasionally swelling of the hands or feet has been observed as a result of mechanical interference with the circulation.

The rapidity with which the disease attacks and spreads over the skin varies in different cases. In some, large areas of skin become indurated in a very short time ; in others, the onset is slow and insidious.

In no case is there any marked elevation of the indurated skin above the level of the surrounding and unaffected parts, though tubercular elevations have occasionally been observed. Where the tightened skin plays over prominent bony parts, as the knuckles, a tendency to ulceration is often observed.

Cutaneous sensibility in most cases remains unaltered. The appendages to the skin, the glands and hair, are rarely affected.

Scleroderma diffusa runs a very chronic course ; many cases may be under observation for years with little or no change apparent, and this under the persistent employment of decided and

varied treatment. The existence of scleroderma does not necessarily exclude that of other skin diseases; acne, comedo, and eczema have been observed simultaneously, and in the same localities.

Scleroderma diffusa is not in itself a fatal affection. In the few cases in which death has occurred while the patient has been under observation, it has usually occurred from some intercurrent disease, totally unconnected with the scleroderma. It is true that, in one case recorded, death was hastened by the extremely inflexible condition of the facial integument, which interfered greatly with deglutition, while in some others respiration was much impeded through immobility of the thoracic walls.

The pathological anatomy of scleroderma diffusa is simply that of a hyperplasia of the fibrous element of the papillary layer and corium, with decrease of subcutaneous fat and increase in pigment deposit.

Scleroderma localis (Morphæa). The symptoms and course of this disease, or form of disease, are very different from those of scleroderma diffusa. The affection is sometimes preceded by nervous symptoms, neuralgic pains, rheumatism, etc. At other times there are no general prodromes. The advent of the local symptoms is usually insidious, so that they are not often observed until the disease has made considerable progress. The most prominent skin symptoms are the appearance of parchment-like patches, with sclerotic striæ. In a typical case described by Bésnier the patches were irregular in shape, usually elongated in the direction of the axis of the body and members, isolated or confluent, sometimes symmetric, sometimes asymmetric. At first sight these patches can be distinguished from the surrounding skin only by their deeper color, their finely striated surface, slightly depressed beneath the level of the surrounding skin, and particularly by a lilac border composed of fine blood vessels.

To the touch the affected patches seem slightly rough, dry, parchment-like, and superficially indurated, so that the skin can be pinched up only in thick folds. Sensation is in no way altered.

The striated patches are sometimes fine and diffuse, and hard to recognize, at other times they are united, forming large patches of convergent stripes.

The localized patches of scleroderma may be observed in any part of the body, but are more common on the trunk. The cases which have come under my observation have presented only the parchment patches (*morphœa*) with lilac areola, and have been observed about the clavicles and on the face.

In addition to the more characteristic patches above described, keloidal lesions and areas of pigmentation are observed at times. Occasionally, also, ecchymoses and phlyctenular lesions occur, and hyperæsthetic points, but these are usually evanescent. In some cases deep-seated and superficial neuralgic pains precede and accompany the appearance of the lesions, occurring in attacks, often nocturnal. In other cases no such symptoms are present.

Accompanying the skin symptoms, rheumatic pains with articular symptoms, ankyloses, and even osseous degenerations, have been reported. The hands and fingers, in particular, are said to become involved. The disease runs a very chronic course, and but few cases have been followed through their entire evolution. It will be seen from the above description that scleroderma, whether of the diffuse or localized form, presents itself in so many varieties as to make it difficult of definition. As to the nature of the localized form, all the evidence points toward a tropho-neurotic origin.

Scrofuloderma. There are a number of skin diseases so closely connected with the condition of the system called *scrofulous* as to be properly designated *scrofulo-dermata*. Of these, one of the commonest is that which begins in one or more of the superficial lymphatic glands, especially under the jaw, about the neck and clavicular region. The glands become enlarged and the process extends to the skin overlying them, which becomes red and infiltrated. Finally a cold abscess forms, and is discharged through the skin, and an ulcer of slow progress, with undermined violaceous border, results.

Bésnier calls scrofulous nodes, especially when they occur superficially, "scrofulous gummata," on account of their resemblance to syphilitic gummata. The most superficial of these gummata begins as a small infiltration or node in the skin, of a livid red color. Increasing in size, slowly at first, and later more rapidly, it sometimes extends in one or more directions, involving the entire skin and softening at one or more points to form small ulcers, with burrowing sinuses extending from one to another. The discharge from these ulcers is usually sero-purulent or sanious, and occasionally bloody, and the skin may be undermined by numerous communicating galleries. Occasionally the disease takes on a diffuse, infiltrating form, spreading in an irregular patch over the skin, involving its entire surface, and giving rise to serpiginous shallow ulcers.

The scrofulous ulcer never shows any disposition to heal. It may look as if it were on the very verge of cicatrization, but it does not actually scar over, or, if it does, a week or two later the cicatrix may open in one place while forming in another.

In addition to the localities above mentioned, this form of scrofuloderma may occur over the cap of the shoulder, in the groin, and elsewhere. It is generally accompanied by other signs of the scrofulous condition, by old scars, etc.

This form of scrofuloderma is to be distinguished from lupus vulgaris and from syphilis by the concomitant general symptoms of scrofulosis and by the peculiar features of the lesions, which differ materially from those of lupus and syphilis. The characters of the primary lesions, the form of the ulcers and their course, and the amount of crusting differ materially. Where the diagnosis between scrofuloderma and syphilis is difficult, the history in some cases will aid.

Another and rarer form of scrofuloderma is characterized by the formation of papillary, wart-like, or fungous growths of a pale, bright, dusky, or violaceous red color. The surface of these growths soon ulcerates, with a thin discharge and some crusting. These lesions are apt to occur upon the backs of the hands, and may extend to such depth as to lead to bone

changes. The course of this form of scrofuloderma is exceedingly chronic.

A fourth variety of scrofuloderma may be referred to, which shows itself in the form of small, hard, scattered, flat papules with a raised violaceous areola. The lesions may occur upon any part of the body, but are usually met with upon the fore-arms, legs, and face. At first they look like the pustular syphiloderma, but crust over after some weeks, leaving a depressed pit-like cavity, of a size to receive the head of a pin, in the lesion. Finally the lesion disappears, leaving a punched-out scar like that of smallpox. This form of scrofuloderma is chronic to an extreme degree. New lesions form while the old ones are cicatrizing; and while the affection does not give rise to any pain or other annoying sensation, it is very rebellious to treatment.

The treatment of scrofuloderma is both general and local. Cod-liver oil, iodine—usually in the form of iodide of potassium, or of Blancard's pills of iodide of iron—and iron alone, are most frequently serviceable. Milton has reported excellent results from the administration of calomel or gray powder, two or three times a week at bedtime for a fortnight, with a saline every morning, so as to produce a daily action of the bowels. Then the mercurial is suspended for from a fortnight to a month, the saline being continued. If the appetite fails, bitters and mineral acids are to be given. Locally a mild zinc ointment is applied. Milton lauds this treatment as curing where all else fails.

Locally the ulcers are to be treated, as a general thing, with stimulating ointments, preferably those containing mercury. Ointments and powders of iodoform are also useful. Tincture of iron and chlorinated soda solution may also be used. Where the disease is extensive, scraping with the curette or sharp spoon, to remove the morbid tissue, as in lupus, is the quickest method.

Tuberculosis of the Skin. Our knowledge of tuberculosis of the skin is of recent date, and even now but little is known of this affection on account of its comparative rarity.

Tuberculosis of the skin usually shows itself as a single round-

ish or oval ulcer, which soon becomes crusted over, giving rise to little pain. On removal of the crust a reddish-yellow granular surface, bleeding easily, is observed. The walls of the ulcer are only slightly infiltrated, soft, not undermined, though sometimes movable over the subjacent tissues. The edges are not smooth, but irregular and eroded, with occasional pits filled with pus. It is extremely rare to find any miliary tubercles.

The ulcer grows by gradual destruction of the edges in an irregular way, presenting occasionally a serpiginous appearance. The tuberculous ulcer is never large, rarely exceeding the area of ten to twenty square centimetres. It shows no tendency whatever to heal. The seat of the ulcer is almost always about some mucous orifice, as the mouth, anus, or vulva, or on the glans penis. The diagnosis is to be made by exclusion.

The treatment, in addition to that described above under scrofuloderma, consists in scraping and applying pyrogallic acid. The prognosis is usually unfavorable.

Scurvy, Land. (See *Purpura*.)

Sebaceous Cyst, or "Wen," as it is popularly called, appears as a variously-sized, firm or soft, roundish tumor, seated in the skin or subcutaneous connective tissue. The skin covering the tumor is natural in color or whitish, from stretching. The tumors may occur singly or in great numbers, and vary in size from that of a pea to a walnut or larger. They are usually firm, but sometimes doughy, and are generally freely movable and painless. Their usual seat is upon the scalp, face, back and scrotum, though they may be met with anywhere, even on the soles. They may last for years unchanged, but sometimes break down and ulcerate. They may degenerate into epithelioma in old persons. Some sebaceous cysts are flat, with a minute hole in the centre; others tend to rise and become semi-globular. The latter are those commonly found on the scalp, where they are devoid of hair.

The contents of a sebaceous cyst may be milky or cheesy in consistence, and are often decomposed and fetid. The tumors are, in fact, nothing more than enormously distended sebaceous

ducts and glands, the walls of which have become hypertrophied until they form a tough sac.

The treatment of sebaceous cyst is excision. The cyst should be carefully dissected out, as otherwise the disease is apt to recur.

Seborrhœa. Seborrhœa is a disease of the sebaceous glands of the skin, characterized by an increase in the quantity of the sebum poured out, and also, in most cases, by an alteration in quality of the secretion. There are two varieties, *S. oleosa* and *S. sicca*.

Seborrhœa oleosa appears in the form of an oily coating upon the skin, giving it an unctuous and greasy feel. Its most common seat is on the scalp and about the face, particularly the nose and forehead, where it appears as a greasy coating, containing more or less dust and dirt, and looking as though the skin had been smeared with dirty ointment. In the scalp it collects on the hair, giving it a dark, limp look, as if it had been freely oiled, or when the scalp is bald it looks as if oil had been poured over it.

Seborrhœa sicca, or dry seborrhœa, occurs in infants as the *vernix caseosa* or smegma of the newborn. Here it is almost physiological, and is usually soon removed. If it remain, it becomes a diseased condition, and as such is often seen on the scalp. Dry seborrhœa shows itself on both the hairy and non-hairy portions of the body, as a more or less greasy mass of scales, of a dirty yellowish color, and somewhat adherent to the skin. On the scalp, these masses are larger and oilier, tending to cling to the skin in thick plates, and leaving, when picked off, a smooth, grayish, moist or oily surface beneath. In old persons the scalp, and sometimes the region of the beard, is covered, to a greater or less extent, with a brown, adherent, greasy coating, which is essentially seborrhœic in character.

Seborrhœa sicca of the scalp, like pityriasis, with which it is sometimes confounded (see *Pityriasis simplex capitis*), is sometimes followed in the young by premature baldness. If taken in time, however, baldness from this cause can be prevented,

and it is desirable in all cases to remove the seborrhœic condition, even if it gives rise to little or no annoyance.

Seborrhœa of the foreskin and glans penis is an abnormal flow of the normal secretion of this part, known as *smegma preputii*. If unattended to, it leads to balanitis, from the irritation of its rapidly decomposing sebaceous products.

Seborrhœa is induced by a variety of causes, prominent among which is the chlorotic or anæmic state. It is more apt to occur about puberty, or in early adult age. It may occur in persons otherwise healthy. In such cases it is usually curable by local measures.

The diagnosis of seborrhœa is usually not a matter of much difficulty; the evidently sebaceous character of the lesions pointing out its nature with sufficient certainty.

The treatment of seborrhœa should usually be both constitutional and local. Fresh air and exercise, especially in the case of young women, is to be insisted upon. Attention should also be paid to diet. The history should be looked into and any functional irregularities corrected when possible. Success in treatment often depends upon ascertaining and meeting the exciting cause in the individual. Cod-liver oil, iron and arsenic are the most generally useful remedies. The following is a useful prescription :—

R. Tinct. ferri chlor.,
Acid. phosphoric, dil., f ʒj
Syrupi limonis, f ʒij. M.

SIG.—Half a teaspoonful to a teaspoonful, in a wineglass of water, three times a day.

Arsenic is best given in the form of Fowler's solution, in four-minim doses at first, gradually increased until the disease begins to disappear, or until the limit of tolerance is reached. It should never be prescribed to be taken in drops, but always in combination with some adjuvant. The following is an excellent formula :—

R. Liq. potas. arsenit., ʒ ij
Vini ferri, ad f ʒiv. M.

SIG.—Teaspoonful after meals, in water.

The local treatment of seborrhœa is very important. In seborrhœa of the scalp the scales and crusts must first be removed. If hard and caked, as is sometimes the case in old people, the scalp should be soaked in oil over night. Hot water and castile soap will then remove the softened crusts, or, if this should fail, the alcoholic solution of *sapo viridis* may be employed. A teaspoonful of this (see *Spiritus saponis kalinus*) may be applied to the scalp with a sponge and a considerable quantity of warm water added, so as to make a lather. After vigorously shampooing the scalp for a few minutes, the soapy matters are to be washed away with an abundance of clear, warm water, the scalp dried quickly with a soft towel, and it is ready for the application of the more strictly remedial agents. These should be in the form of oils, if the hair is at all thick, because ointments are so apt to stick the hairs together and make a mess. The sort of application to be made will depend upon the condition of the skin. Generally the scalp will bear more stimulating applications. Of these carbolic acid is one of the most efficient, as in the following combination :—

R. Acidi carbolici, ℥j-℥ss
 Ol. ricini, ℥ij
 Ol. limonis, ℥j
 Aquæ cologniensis, . . . ad ℥ij. M.

SIG.—Apply after washing.

When there is little hair upon the scalp, the following ointment may be used :—

R. Sulphuris præcipitat., ℥ss
 Ung. petrolii, ℥iv. M.

SIG.—A small quantity to be rubbed in, once a day.

This preparation is also useful in seborrhœa about the body.

Another preparation useful about both scalp and body, especially in *S. oleosa*, is this :—

R. Acid. tannic, ℥ss-℥j
 Ung. petrolii, ℥j. M.

Mercurials are sometimes of value. Either the red oxide of mercury, ten to twenty grains to the ounce, or the ointment of

nitrate of mercury, one to three drachms to the ounce of vaseline, may be employed.

The prognosis of seborrhœa will depend upon the duration and extent of the disease and upon the patient's general health. Dry seborrhœa can generally be gotten well, under proper treatment, in a reasonably short time. But when in the scalp and mixed with more or less pityriasis, the prognosis is not so favorable. Premature baldness may follow neglected seborrhœa. If the hair has already begun to fall out a cautious prognosis must be given. Even if the most active treatment is followed out there is little hope of bringing back the hair, although its fall may be arrested.

Shingles. (See *Herpes zoster*.)

Smegma. (See *Seborrhœa*.)

Spiritus Saponis Kalinus. A solution of two parts saponi viridis in one part alcohol, made by the aid of heat, filtered and scented with oil of lavender.

Strophulus. (See *Miliaria*.)

Stye. (See *Hordeolum*.)

Sudamen. (See *Miliaria*.)

Sweat, Bloody. (See *Hæmatidrosis*.)

Sweat, Colored. (See *Chromidrosis*.)

Sweat, Phosphorescent. (See *Phosphorescent Sweat*.)

Sweating, Excessive. (See *Hyperidrosis*.)

Sycosis. Sycosis is a chronic, inflammatory, non-contagious disease, involving the hair follicles, characterized by pustules, papules and tubercles, perforated by hairs, accompanied by burning and itching. The disease is confined to the beard and hairy parts of the face. Papules and then pustules form, each one having a hair as its centre, and showing little inclination to rupture. The pustules are generally discrete, but are sometimes so numerous as to be crowded together. They are accompanied by marked redness of the surrounding skin, sometimes by swelling, burning and pain. Unless the suppuration is profuse, the hairs cannot be extracted without giving much pain. The causes of the disease are not known. It sometimes occurs on the upper

lip, however, following catarrh of the nose. It occurs equally in those who shave and those who do not.

The disease is essentially an inflammation of the hair follicles. In the early stages the hairs are firm in their follicles, but when there has been a good deal of suppuration they become loose, and may be pulled out. A cicatrix, with baldness, then results.

Sycosis is apt to be mistaken for eczema of the beard, and more especially for tinea sycosis, or true barber's itch. From the latter it is, however, distinguished by several marked features. In both affections the hair follicles are attacked, but in the parasitic disease the lesions are simply large, rounded, red lumps, or variously-sized nodules, with few or no pustules. The hairs, however, in spite of the fact that there is no suppuration about their roots, come away easily, and sometimes drop out spontaneously. The presence of the spores of the vegetable parasite, when looked for in the roots of the diseased hairs under the microscope, will greatly aid in the diagnosis. (See *Tinea sycosis*.) From eczema of the beard sycosis is distinguished by the absence of oozing or weeping, and also by the fact that eczema rarely attacks the beard without showing itself elsewhere. It spreads about in pustules and crusts in the neighborhood, while sycosis is strictly marked by discrete pustules, each with its hair running through the centre.

External treatment is that most generally useful in sycosis. Exposure to irritating influences is to be avoided. The hair should be kept clipped close or shaved. The latter is to be preferred. Although painful at first, I regard it as the *sine qua non* of successful treatment, and usually insist upon it. In this, as in some other matters, it is only the first step which costs; after shaving a few times, the patient is brought to see the reasonableness of the procedure, by the comfort which it brings. Shaving should be practiced every second or third day, according to the rapidity with which the beard grows. When shaving is to be performed for the first time, the hairs should first be clipped close, and then a poultice should be applied, to soften the crusts. When there is much inflammation, this poultice may be made of

bread-crumb and dilute lead water, and applied cold. This is very soothing. After such careful preparation, shaving is a much less painful operation than it would otherwise have been. Shaving having been established as a habit, the local medical treatment may be put into employment. When the disease is acute and there is a good deal of pain and swelling, black wash may be thoroughly applied every two or three hours, followed each time, so soon as it is dry, by oxide of zinc ointment, gently applied by means of the finger, or spread upon pieces of soft linen and bound upon the parts.

The following wash, not to be followed by ointment, is likewise of service in acute sycosis:—

R. Pulv. zinci carb. præcip.,
 Pulv. zinci oxidi, aa ʒ ij
 Glycerinæ, f ʒ ij
 Liq. plumbi subacetat. dil., f ʒ ij
 Aquæ rosæ, f ʒ viiss. M.

In subacute cases the following wash is very good:—

R. Sulphur. præcipitat., ʒ ij
 Pulv. camphoræ, gr. x
 Pulv. tragacanth, ʒ j
 Aquæ calcis, f ʒ iv. M.

SIG.—Shake well, and apply two to four times daily.

If ointments are to be employed, the following will be found soothing, in the acute stage:—

R. Pulv. zinci carb. præcipitat.,
 Pulv. zinci oxidi, aa ʒ j
 Ung. aquæ rosæ, ʒ j. M.

To be applied immediately after shaving.

Another convenient ointment, slightly more stimulating, is the following:—

R. Hydrarg. chlor. mitis, gr. xv-xxx
 Ung. aquæ rosæ,
 Ung. zinci oxidi, aa ʒ ss. M.

When the affection is of long standing, and when there is much infiltration, *sapo viridis* well rubbed in with a flannel rag

and a little water, and after washing off followed by ung. diachylon, may be employed.

When the eruption exists only at one or two points, and is subacute or chronic, stronger stimulants may be used. Sulphur ointment, half a drachm to a drachm to the ounce, or one of the mercurial ointments, may be employed.

Depilation is only to be used when the roots of the hairs are loosened by suppuration.

The prognosis in sycosis should be guarded, for while some cases yield readily to treatment, others, particularly when the disease involves a considerable area of the face, last for months, and even years, in spite of the most assiduous attention. Relapses are not uncommon.

Sycosis, Non-parasitica. (See *Sycosis*.)

Sycosis, Parasitica. (See *Tinea sycosis*.)

Syphilis of the Skin. The syphilitic eruptions of the skin are characterized by certain features in common. These are: 1. Polymorphism. 2. Peculiar color. 3. Rounded form. 4. Apyretic, indolent, non-itchy character. 5. Curability by mercury.

They will be conveniently considered under the following heads: I. Erythematous. II. Papular. III. Pustular. IV. Tubercular. V. Gummatous. VI. Bullous. (A vesicular and a pigmentary variety are described by authors, but they are extremely rare.)

The Erythematous syphiloderm is the earliest and one of the commonest manifestations of syphilis, but occurring, as it often does, upon the covered parts of the body, and giving rise to no subjective symptoms, it often passes unnoticed. It comes out from the sixth to the eighth week after the appearance of the chancre, but when mercury has been given from the first its advent may be very much delayed. It presents itself in the form of diffuse macules of various sizes, and of a pale rose, later a brownish or yellowish tint. (See colored plate, Fig. A.) It is usually seen on the sides of the body and on the abdomen, chest and back, also on the flexor surfaces of the limbs, rarely

upon the face and hands. The diagnosis of the erythematous syphiloderm is usually not difficult. It is commonly accompanied by some of the other symptoms of syphilitic infection, general malaise, nocturnal headache, wandering pains in the limbs, sore throat, etc. ; while not infrequently traces of the chancre and the engorgement of the inguinal, sub-occipital and other glands, can be made out.

The erythematous syphiloderm runs a slow course, and is often accompanied, toward the last, by papular and other lesions, showing the polymorphous nature of the disease.

The Papular syphiloderm is characterized by the appearance of small, hard, solid elevations of various size, not containing fluid, and of a coppery or ham-red color, terminating in resolution. It assumes various forms, small and large, scaly, moist, and vegetating. The small papular syphiloderm consists of single and disseminate or grouped, pin-head to small pea-sized, hard, round, or pointed papules, at first bright red in color, but later of a dusky tint. It is a well-marked eruption, generally occupying a considerable area, and found commonly about the shoulders, arms, trunk and thighs. (See colored plate, Fig. B.)

The small papular syphiloderm may occur, as one of the early manifestations, as early as the third or fourth month, or it may occur later, after other lesions have occurred. Relapses are not infrequent. Other lesions, as large papules, small pustules and moist papules, are apt to be present at the same time. It is most likely to be mistaken for eczema, especially when it itches slightly, as it does at times, on its first appearance. It may also be mistaken for psoriasis. A reference to the description of these affections and to the tables of differential diagnosis will show their distinguishing features.

The large papular syphiloderm is, in some respects, similar to the smaller variety, but is met with in other localities, and shows fewer as well as larger lesions. Its favorite seats are the forehead, just beyond the scalp (*corona veneris*), about the mouth, nape of the neck, back, flexor surface of the extremities, scrotum, labia, perineum and margin of the anus. It is one of the commonest

of all the syphilitic skin diseases. It may occur early or late, but is very apt to follow closely on or accompany the erythematous syphiloderm. This variety is more amenable to treatment than the small papular, excepting where it takes on the annular or serpiginous form, when it may prove very stubborn and persistent.

The moist papule (sometimes called "mucous patch," though this term should be restricted to lesions occurring on mucous membranes) is the ordinary papule, with its horny, epithelial surface macerated off, usually on account of the contact of two contiguous surfaces, as in the neighborhood of the anus and scrotum, and about the mouth. The surface of these patches is dusky red, moist and secreting. These lesions are the most dangerous, as to contagion, of all syphilitic lesions, and quite as many cases of chancre are derived from these moist papules and from true mucous patches of the inside of the mouth, as from chancres. The favorite seats for moist papules are the glans penis and scrotum in the male, the external genitals in the female, the umbilicus in infants, and the edge of the mouth and the anus in all three. The diagnosis rarely presents any difficulty, because there are almost always concomitant lesions.

Occasionally the moist papule takes on a luxuriant, papillary, warty growth, when the lesions are called vegetating papules. They resemble, but are on no account to be mistaken for, the non-syphilitic, "venereal" or acuminated wart. The secretion of the vegetating papule is highly contagious. It does not, however, produce another vegetating lesion on the person inoculated, but an ordinary chancre.

The papulo-squamous syphiloderm is a papular eruption, where the scaly element is prominent. It is chiefly interesting because it is apt to be mistaken for psoriasis—a misfortune rendered much more likely to happen by the perversity of some writers, who call this lesion "syphilitic psoriasis," a misleading and confusing term, which should never be employed. The chief element of distinction lies in the fact that psoriasis is altogether a scaly disease, with but little infiltration, while the papulo-squamous

syphiloderm shows comparatively few scales, with a hard, sometimes raised base.

The syphilitic disease is not uncommonly found on the palms and soles, while psoriasis is very rarely found in this locality. (See differential diagnosis of palmar lesions under *Psoriasis*.)

The pustular syphiloderm occurs in a variety of forms. The pustules vary greatly in size, but are all characterized by the rapidity with which they crust, a rapidity increasing with the size of the pustule. The small pointed pustular eruption is abundant and usually occurs with some other and characteristic lesions; it presents no peculiarities of interest except that, as it matures, the epidermis around the lesion raises and forms a ring or collarette which is very distinctive. The large pointed pustular syphiloderm is the eruption which used to be called "syphilitic acne" (another barbarous and confusing designation). The pustules resemble those of acne, and still more those of smallpox, and when they occur upon the face, accompanied with high fever, care must be exercised in examining all the concomitant symptoms, or a mistake in diagnosis may be made, and a syphilitic patient thrust into a smallpox hospital. The crusts which result from the drying up of the pustules rest upon little ulcers, and this gives an important diagnostic point. For if, upon lifting a crusted pustule, it displays a little well of pus beneath it, the lesion is syphilitic, while, if only an excoriation is seen, the lesion is almost certainly not syphilitic. In addition to acne and smallpox this syphilitic eruption is apt to be confounded with the iodide of potassium eruptions. (See *Dermatitis medicamentosa*.)

The small, flat, pustular syphiloderm is made up of small, flat pustules aggregated in groups and rapidly crusting. It occurs chiefly about the nose, mouth, in the beard, on the scalp, and about the genitalia. On lifting the crusts a shallow or deep ulcer is found. It may be mistaken for impetigo or eczema, but ulcers are not found in those affections. It is one of the more benign syphilodermata.

The large, flat, pustular syphiloderm shows itself in finger-nail-

sized, flat pustules on a deep red base. Sometimes the ulcer underneath is shallow, at other times deep, punched out and secreting an abundance of pus, which may dry up in thick oyster-shell-like crusts (*rupia*). The shallow, ulcerated pustules of this variety are benign. The deeper ulcers generally occur in broken-down individuals and are of more unfavorable significance. They can hardly be mistaken for any other disease. They occur in the ninth to the twelfth month of syphilis.

The Tubercular Syphiloderm. The eruption here consists of one or more solid elevations of the skin, varying in size from a split pea to a hazlenut; smooth, glistening, rounded or somewhat pointed, hard, and felt to be deeply seated. Their color varies from a brownish-ham color, to a bright red or true copper color. Sometimes they have an intensely dusky red hue, a color not met with in any other disease of the skin.

The lesions may occur singly or grouped, sometimes in circles or crescents, occasionally melting together in indurated patches. Usually only a few lesions or a small patch occurs. This eruption is never diffused over a large area.

Sometimes the tubercular lesions are grouped in a serpiginous form, and occasionally they ulcerate and crust, but not to a marked degree. The eruption is indolent and occurs late in the history of the disease, rarely showing itself before the second year. Not infrequently its appearance is delayed to five, ten, even twenty years after the initial lesion, and in women, where the initial lesion and early symptoms are often overlooked or ignored, no "history of syphilis" can be obtained. Now and then vegetations may spring up on the tubercular syphiloderm, forming wart-like and cauliflower excrescences, with a fetid secretion.

The tubercular syphiloderm is peculiarly liable to be mistaken for lupus vulgaris. The tubercles of syphilis, however, are firmer, more deeply seated, and have a history of more rapid development. Lupus, moreover, appears usually first in childhood, while the tubercular syphiloderm is rarely seen before adult or middle age. Occurring on the face and especially in

the region of the cheeks and canthus of the eyelids, the ulcerative tubercular syphiloderm may be mistaken for epithelioma, and this is the more easy because the syphilitic ulcer sometimes becomes converted into an epithelioma, of which I myself have seen two instances. The touchstone of treatment must be used here, and if the suspicious ulcer fails to yield to mercury and iodine it should be cauterized or excised.

The Gummatous Syphiloderm. Gummata are among the later lesions of syphilis. They are usually situated primarily in the connective tissue, and only subsequently make their appearance in the true skin, but occasionally the skin is first attacked and the gumma appears as a more or less circumscribed, slightly-raised, rounded or flat tumor, variable as to size and strongly tending to break down into an ulcer. The lesion resembles a blind boil or abscess, with its dusky, purplish color and almost fluctuating sensation under the finger. Gummata are usually solitary. When ulceration takes place the cavity is deep, but fills up rapidly as a cure takes place. Gummata are apt to be mistaken for furuncle, abscess, enlarged lymphatic glands, carcinoma, and for fibrous and fatty growths. Gummata are not unfrequently poulticed and then cut open, by too zealous surgeons, with great resultant chagrin, when the firm, dry walls gape, where pus was expected to flow. They should never be lanced, as it is much easier to cause resolution by appropriate remedies than to cure the open sore which follows cutting.

The Bullous Syphiloderm is very rare. It is characterized by the appearance of blebs containing a clear, watery fluid, which soon tends to become cloudy and thick. Sometimes the lesion is more like a large pustule than a bleb. The lesions soon break or dry up with rupial crusts. When these are removed shallow ulcers are found. The bullous eruption is a late manifestation of syphilis, and is met with in the cachectic and broken down. It can only be mistaken for pemphigus or dermatitis herpetiformis, and in both of these affections the bullæ contain serum and not pus, and rupial crusts are absent.

The treatment of the syphilitic affections of the skin should,

in the early diffused eruptions, be internal only. When the lesions are comparatively few in number and of some size, especially when they are ulcerative, local applications may be used with benefit. Finally, in the late and indolent ulcerative, tubercular or gummatous lesions, local treatment alone often suffices to heal the lesion, and since internal treatment, however good, will not insure against a relapse, it need not necessarily be used. Mercury is to be employed in the earlier and generalized lesions. The protiodide of mercury, in doses of one-fourth of a grain, in pill form, thrice daily, gradually increased until the disease yields or the gums are touched slightly, is the best average treatment. The biniodide of mercury is also very useful in doses of $\frac{1}{16}$ to $\frac{1}{8}$ grain, dissolved in water, with the aid of a little iodide of potassium, when for any reason it is preferred to give the mercury in a fluid form. Iodide of potassium is to be reserved for the later lesions, or to mix with the mercurial in stubborn cases. A dose of five grains will be found large enough in the great majority of cases, but it must be pushed rapidly if the lesions do not yield.

Local treatment is required, when the lesions are situated on the face and hands, and when it is desirable to hasten their disappearance by all means, or when ulcers, with profuse and disagreeable discharge, are present in any part of the body. For dry lesions, the ammoniated mercury ointment, or a twenty or ten per cent. oleate of mercury, may be rubbed firmly into the skin, once or twice daily. For moist lesions, a solution or stick of nitrate of silver may be employed. In ulcers, bits of soft linen, cut a little smaller than the lesions and spread thickly with ung. hydrarg. full or half strength, may be applied.*

Skin Diseases in Hereditary Syphilis. The syphilitic eruptions of infants are, in all respects, the same as those of

* To supplement the necessarily brief account of the syphilitic skin diseases and their treatment here given, reference may be made to the text-books on syphilis. I have given my own views at some length, in an article on *Syphilis*, in the International Encyclopedia of Surgery, Vol. II.

adults, excepting in so far as their appearance is altered by the peculiarities of structure of the infantile integument.

The mortality of syphilitic children is very great, fully one-third failing to reach maturity. Abortion, resulting from the death of the foetus, usually occurs about the sixth month. An aborted foetus is usually in a macerated condition, the skin being easily detached, and the surface having a livid purple color. The integument either shows nothing characteristic, or large bullæ may be found on the palms and soles.

Syphilitic children generally present a healthy appearance at birth, and, for a week or two, all seems to go well. Then symptoms of debility and decreased vitality show themselves; the infant begins to emaciate, and grows wizened and aged in appearance. Catarrh of the nasal passages—"the snuffles"—shows itself, interfering with respiration, and thus sometimes itself alone being the cause of death. The skin becomes yellow, loose and wrinkled. It is drawn tight over the bones of the face, which become sallow and earthy, with prominent eyes and a peculiar senile expression, the infant presenting the appearance of decrepid old age. Now and then, however, excessive emaciation is not observed, even when the syphilitic poison has affected the system to a marked degree.

The *erythematous* syphiloderm is that which is earliest and most frequently observed in infants. It generally makes its appearance about the third week of life, often accompanied by coryza, and showing itself first on the abdomen, in the form of minute, round or oval, pink macules. It spreads rapidly over the surface of the body and limbs, and the patches grow larger and darker, until they may be half an inch in diameter, slightly or not at all elevated above the surface, coppery-red in color, and no longer, as at first, disappearing under pressure. There is usually little or no scaliness, excepting slight desquamation, at times, upon the hands and feet.

This eruption is very liable to be confounded with the simple erythematous rashes of early infancy. The most important diagnostic points are the tendency to infiltration, and the formation

of papules in places where the skin comes together in folds, as about the neck, and especially in the region of the genitalia and nates. In addition, the tendency to scaliness about the palms, soles, and occasionally the nates, is more or less characteristic. Sometimes, however, it is impossible to distinguish between the syphilitic eruption and simple erythema about the nates, at first sight, and the case must be held under advisement for a certain time, local treatment only being employed, before a positive diagnosis can be given. The syphilitic eruption tends to get worse, show moist and infiltrated patches, etc., while other symptoms show themselves elsewhere. The eczematous eruption will either improve under local treatment or tend to show weeping and itchy patches, and vesicles or pustules.

The *papular* syphiloderm in infants is usually met with in connection with the erythematous eruption, but sometimes it may occur first. The lesions are dull-red, small, flat papules, occasionally mingling to form a patch. When seated about the anus or genitalia, the lesions become changed into typical moist papules, and now and then vegetations or syphilitic condylomata grow out of these lesions. These are *highly contagious*, and must be carefully distinguished from the simple vegetations growing about these parts, in children who are poorly cared for. The latter are apt to be smaller, more pointed and dry, and occur almost invariably near some muco-cutaneous juncture. They spring directly from the skin, while the syphilitic vegetations grow from an indurated, often moist, base. The simple vegetations are not so apt to have a fetid odor, whereas, the syphilitic condylomata secrete an excessively offensive seropurulent liquid. Moist papules in the infant are apt to occur at the verge of the anus and the commissure of the lips. In the latter locality they lead to deep fissures, the scars of which form diagnostic marks of hereditary syphilis in later life.

The *pustular* syphiloderm in infants may occur before the eighth week in children profoundly affected with syphilis, but usually shows itself at a later period. The pustules may be large, numerous and deep, or few and small, according to the

severity or mildness of the disease. The thighs, buttocks and face, are usually attacked. On the face they may coalesce and form thick, green, crusted lesions, resembling those of impetigo or pustular eczema. The syphilitic crusts, however, are dark, thick and greenish, while those of the other diseases are lighter. On removal of the crusts the syphilitic lesions are found ulcerated, while only a shallow erosion is found under the eczema and impetigo crust. Moreover, itching, which is very common in eczema, does not exist in the syphilitic lesion.

A *furunculoid* eruption is sometimes met with in hereditary syphilis. The lesions begin as small nodules in the corium, and gradually increase to the size of half a nutmeg; ulcers form on the summit; sloughs are thrown off, and irregular, unhealthy cavities, with scanty, offensive secretion, are left, the lesions subsequently running a chronic course. They often result in cicatrices.

Tubercular and *bullar* eruptions sometimes occur in hereditarily-syphilitic children; the former show no marked difference from similar lesions found in the adult. The bullar syphiloderm, the "pemphigus syphiliticus" of older writers, is usually found on the palms and soles. The skin shows patches of a violet color; in a short time, small, confluent vesicles make their appearance on these spots, and then coalesce and grow larger, until the fully-formed bullæ show themselves, varying in size from that of a pea to a hen's egg, with a yellowish-green, opalescent color and purulent contents. The lesions may be brownish or hemorrhagic; they break in a day or two, and leave shallow ulcers. The bullar syphiloderm is a symptom of grave import. It is important to distinguish it from simple pemphigoid eruptions. This may be done by noting its earlier appearance (it is congenital, or appears very soon after birth), its usually more serious character, and the concomitant symptoms and history. It is rarely the only symptom. Sometimes impetigo contagiosa may be mistaken for the bullar syphiloderm, but its non-ulcerative character, place of election, trifling severity, etc., should prevent this mistake. (See *Impetigo contagiosa*.)

The treatment of hereditary, infantile syphilitic skin diseases is essentially that of the disease in general. Mercury may be administered by baths, inunctions, or internally. Warm, daily baths, each containing ten grains of the bichloride of mercury, are frequently highly beneficial. A small flannel skirt, with the waist tied around the infant's neck, and then spread over the edge of the tub, will permit it to splash, without danger of sending the fluid into its mouth. The dose is sufficient for any age, from one month to twenty. Inunctions of mercurial ointment, in full or in half strength, may be employed. The best procedure is to smear a piece of ointment, the size of a small walnut, thinly over a flannel band, and then pin it around the abdomen, not changing it, but applying fresh ointment daily, until the flannel becomes stiff. Gray powder is given internally by many physicians. I rarely use it. In the later furunculosis and pustular eruptions the iodide of potassium, in doses of half a grain to two grains, according to the age of the infant, may be given with advantage. Inunctions of cod-liver oil, or the same internally, may be given at times, and nourishing and appropriate diet is absolutely required.

Syphiloderma. (See *Syphilis of the Skin.*)

Telangiectasis. (See *Angioma.*)

Tetter. A popular name given to several diseases, but chiefly to eczema.

Tinea. The name given to the vegetable parasitic diseases of the skin. Of these we have *T. circinata*, or ringworm of the body, *T. tonsurans*, or ringworm of the head, *T. sycosis*, or ringworm of the beard, *T. favosa* or favus and *T. versicolor*, each of which will be described as clinically separate affections.

Tinea Circinata, or ringworm of the body, is a contagious, vegetable parasitic disease, due to the presence of minute spores and mycelia or threads growing in the epidermis and giving rise to one or more circumscribed, circular, variously-sized, inflammatory, squamous patches, occurring on the general surface of the body, accompanied by itching. The disease usually begins as a small, reddish, scaly, rounded or irregular-shaped spot,

which in a few days assumes a circular form, healing in the centre as it spreads on the periphery, which is usually papular, but may occasionally be made up of small vesicles. Sometimes the rings coalesce and form gyrate figures. The disease may attack any part of the body, and is transmitted by contagion from one part to another. In children who have ringworm of the scalp more or less ringworm of the body is almost sure to be found at one time or another.

Ringworm is eminently contagious, and is not only transmitted from one human being to another, but also from domestic animals, chiefly horses, dogs and cats. Children are more susceptible to the disease, although adults also may contract it. The diagnosis of ringworm may usually be made from its very peculiar clinical features, and also from examination of the scales by means of the microscope. A few scales soaked in a drop of liquor potassæ and examined under a power of 350 diameters, will show long threads running across the epidermic cells, which are quite characteristic. Their absence, however, is not conclusive against the diagnosis of ringworm, as they are sometimes scanty and difficult to find.

The treatment of tinea circinata is simple. The lesions are to be cleansed with soap and hot water, and then an ointment of ammoniated mercury, 15 to 40 grains to the ounce, may be thoroughly rubbed in. The process to be repeated twice daily, until a cure is effected. In more stubborn cases, a lotion or ointment, of one drachm of sulphite of sodium to the ounce, or pure, strong sulphurous acid sopped on, will usually suffice. In obstinate ringworm of the thighs and groins, the following ointment is efficient. This is for adults:—

R.	Creasoti,	℥xx
	Olei cadini,	f℥iij
	Sulphuris,	℥iij
	Potassii bicarbonatis,	℥j
	Adipis,	℥j. M.

There are other remedies innumerable, but those mentioned will, one or another, generally suffice.

Tinea Decalvans. A confusing term, indifferently applied to alopecia areata and to tinea tonsurans; two widely different diseases in nature, appearance and treatment, as will be seen by referring to the account of them given under their respective titles.

Tinea Tonsurans, or ringworm of the scalp, is precisely the same disease as tinea circinata, above described, only occurring in the scalp, especially in the hair follicles. It is characterized by one or more, usually circular, variously-sized, more or less bald, patches, covered with ashen-gray scales, with a "goose flesh" appearance, and numerous small, broken-off stumps of hair. Sometimes the disease is disseminated, when a search through the scalp will show black points scattered here and there, which are the stumps of diseased hairs broken off level with the scalp. Ringworm of the scalp is a disease of childhood, and is not met with in the adult. It is highly contagious among children. Microscopic examination shows the hairs filled with roe-like spores, infiltrating their tissue and rendering them highly brittle.

The diagnosis of ringworm of the scalp is usually easy. The only disease with which it is liable to be confounded is alopecia areata, but here the hairs fall out entire, leaving a smooth, ivory-like surface. Now and then squamous eczema of the scalp looks like ringworm, but there are no broken-off hairs.

The treatment of ringworm of the scalp is tedious and difficult, because it is hard to get the remedies down to the roots of the hair, where the fungus greatly flourishes. Of the great number of remedies constantly turning up, almost all would be good if they could be gotten into contact with the fungus, but the best will fail if it cannot be made to reach the last and remotest spore in the deepest hair follicle.

As a preliminary to treatment, the hair should be cut short, scales should be cleansed from the scalp, and the diseased hairs should be pulled out by means of convenient forceps, immediately after which the parasiticide should be applied. In boys, when the eruption is extensive, the scalp may be shaved from

time to time. Daily epilation of diseased hairs is an exceedingly troublesome, but very necessary procedure.

Among local remedies carbolic glycerine is one of the best. It may be applied to the diseased patches in strength varying from 1 in 8 to 1 in 3, according to the age of the patient, while a weaker lotion of the same should be smeared over the scalp generally, to prevent drying of the scales and spread of the contagion.

An ointment highly recommended by Alder Smith is the following:—

R. Acid. carbolic. cryst.,
 Ung. hydrarg. nitrat.,
 Ung. sulphuris, . . . , aa ʒ ss. M.

The ingredients are to be mixed without heat. This ointment may be used in children over eleven years of age. Under this age it is advisable to use a double proportion, or even more, of the sulphur ointment. This may be used once a day over the entire scalp, the patches themselves being rubbed twice a day. As made in this country, it is apt to be very soft, which is an inconvenience. In disseminated ringworm of the scalp, oleate of mercury (a five per cent. solution in children under eight years of age, and a ten per cent. solution in older children) may be used. The oil is to be rubbed in nightly, with a sponge mop, care being taken not to allow it to run over the face; a cap should be worn at night. When the scalp is very irritable and the application of any of these remedies causes inflammation and superficial crusting, the following ointment may be used with advantage:—

R. Ol. cadini, ʒ iss
 Sulphuris, ʒ iss
 Tinct. iodini, ʒ iss
 Acid. carbolic., mxx-xl
 Adipis benzoat., ʒ iv. M.

In weakly children cod-liver oil, arsenic and iron are often required, and should always be prescribed if the case seems to demand them, or if the eruption spreads from one place to another while under treatment.

The prognosis of *tinea tonsurans* should be guarded as to the time required to effect a cure. In cases of average severity, if there are several coin-sized patches of disease, and if the hairs are at all markedly involved, four months, at least, of careful treatment will usually be required to effect a cure. When the disease is disseminated a much longer time will be required. A cure should not be promised, unless all directions as to shaving, epilation, etc., are faithfully carried out. In cases where kerion forms, as the result of treatment, or in the course of the disease, a more rapid cure may be expected. (See *Tinea kerion*.)

Tinea Kerion is an inflammatory and suppurative form of *tinea tonsurans*. It shows smooth, yellowish, reddish or purplish patches, more or less raised, œdematous and boggy. They are honeycombed and studded with yellowish, suppurative pits, the openings of the distended hair follicles deprived of their hairs, which discharge a mucoid, gummy, honey-like fluid. They sometimes itch, burn and pain. In severe cases baldness results. The condition sometimes supervenes in a mild degree during the treatment of *tinea tonsurans*. The treatment is the same as the latter, excepting that lotions of sulphurous acid may be added to the parasitocides above mentioned. Alder Smith has suggested the artificial production of *T. kerion* by penetrating the hair follicles by a needle moistened with croton oil. This must be practiced with caution, and only over a small area, say a quarter of an inch square, at any one time, for fear of exciting too great inflammatory action.

Tinea Sycosis, or ringworm of the beard, is confined to the hairy part of the face and neck, and is characterized by inflammation of the hair follicles, with the formation of dull-red, fleshy tubercles, with little or no suppuration. The disease usually begins with slight redness and scaliness, as *tinea circinata*, but in a few days the hairs begin to be affected; they become dry, brittle and sometimes loose, the skin becomes nodular and lumpy, with here and there, in some cases, points of pustulation about the hair follicles. The deeper tissues become involved later, and thick, raised masses of induration of a dusky, reddish

or purplish color appear, giving rise to considerable disfigurement; the rapidity of development is sometimes remarkable. Though there is usually little or no suppuration, yet, now and then, suppuration with crusting may be profuse, so as to mask the essential features of the disease and make it look like pustular eczema. The symptoms vary much in different cases. Sometimes there is a good deal of burning and itching; at other times there is very little. The affection is never so troublesome as simple sycosis. The cause of the disease lies in the presence of the ringworm fungus, and the structure of the parts alone causes it to differ from the other forms of ringworm in appearance.

The diagnosis of tinea sycosis from simple sycosis is sometimes difficult; but there are certain characteristic features which must be borne in mind. In *T. sycosis* there are hard, reddish lumps as large as a pea or a cherry, and evidently extending down into the skin, while in simple sycosis the lesions are superficial pustules on a comparatively smooth, inflamed surface. The hairs in *T. sycosis* are loose and easily pulled out, while in simple sycosis the hairs are firm and the attempt to pull them out gives rise to much pain, unless there has been a good deal of suppuration about their roots. (See *Sycosis*.) It must be remembered that tinea sycosis is the true "barber's itch," and is often contracted in barber shops from the use of a razor or shaving brush impregnated with fungus from a case of the disease previously shaved.

The treatment of ringworm of the beard requires both epilation and the use of parasiticides. Any hairs which are loose should be pulled out, all crusts and scales removed, and one of the remedies mentioned under tinea tonsurans immediately applied. In addition to these, lotions of sulphite of sodium or of sulphurous acid are often useful.

Tinea Favosa, or favus, is a vegetable parasitic disease, the fungus, however, being of a different species from the ringworm fungus. The affection first appears as a diffused or circumscribed superficial inflammation, with slight scaling, followed by the appearance of one or several pin-head-sized, pale yellow crusts

seated about the hair follicles, which develop into the characteristic lesions of the disease, raised, sulphur-yellow cups, which can be detached from the skin underneath, having a moist, exco-riated surface. The cups are friable and can be powdered between the fingers. They sometimes aggregate into masses. Usually each cup has a hair running through its centre. When the disease is extensive, ulceration may exist under the crusts. It is usually situated in the scalp, but the nails and skin generally may be attacked in rare cases. When the nails are attacked they become thickened, yellow, opaque and brittle. Favus possesses a peculiar odor like musty straw, or like the smell of mice. The disease gives rise to some, but not to excessive, itching.

When favus has existed in the scalp to a severe degree and for a long time, a cicatricial condition with permanent baldness may ensue. Favus is a chronic disease. Situated in the scalp it requires most energetic treatment to dislodge it, and is very prone to relapse. Some pessimistic English observers think it can never be totally eradicated, but as met with in this country it is curable. It is a rare disease.

The diagnosis of favus is usually easy; the peculiar yellow cups and the odor are commonly present, and even where the shape of the cups has been lost by suppuration or broken down by treatment, a patch of characteristic color can usually be seen here or there. The mousey odor is almost always perceptible, and most cases can be diagnosticated by this alone.

In the treatment of favus of the scalp the hair is to be cut as short as possible, after which the crusts are to be removed with poultices, or applications of olive or almond oil, and soap and hot water, as in pustular eczema of the scalp. After they have been removed, the scalp, in severe cases, will show pits and depressions, with atrophy, baldness, or areas of superficial ulceration, resembling the effects of syphilis. Depilation is then to be practiced by means of a pair of flat-bladed forceps, especially made for the purpose, or by other means. A small patch should be cleared each day. Immediately after depilation a parasiticide should be applied, and there is none better than a saturated

solution of sulphurous acid. Sulphur ointment, alone or with tar, may also be employed. Yellow sulphate of mercury, half a drachm to the ounce, or chrysarobin ointment of the same strength, cautiously used, may also be used with benefit. The disease is, of course, contagious, and precautions must be taken against its transmission, particularly among children in families.

Tinea Versicolor is a vegetable parasitic disease, which begins by the formation of pin-head and split-pea-sized, yellowish spots, usually scattered here and there over the affected region. These grow gradually larger and coalesce, forming hand-sized and even extensive patches, with extremely irregular margins, sharply defined, against the sound skin. There may be only a few patches, or on the other hand, the disease may be quite extensive. The patches are usually more or less scaly. The disease does not usually itch in cool weather, but when the patient grows warm and sweats, there is apt to be a good deal of itching. In some cases there is never any itching. The chest and back are the parts usually and chiefly affected, the disease also spreading down the flanks, and over the buttocks, abdomen and groin. The disease rarely extends above the shirt collar, below the elbows, or below mid thigh. Practically, it is an affection of the trunk, which often presents a mapped appearance, owing to the peculiar and irregular configuration of the lesions. The disease usually spreads slowly, and without treatment may continue for an indefinite period. Relapses are not uncommon, even when the treatment has been most judicious.

The diagnosis of tinea versicolor is not usually difficult. The seat of the disease is usually upon the trunk alone, and, wherever else it occurs, it is always to be found there. Vitiligo, chloasma and the macular syphiloderm are the diseases with which *T. versicolor* is most apt to be confounded. In vitiligo, however, the patches are rounded and white; it is the surrounding skin which is dark; in chloasma the face and forehead are the chief seats of the disease, and are rarely spared, while in *T. versicolor* the face is never attacked. The macular syphiloderm does not often occur in large patches and sheets, and it is not confined to

the localities of *T. versicolor*; also, there are almost invariably concomitant symptoms of syphilis. From all these affections *T. versicolor* is distinguished by its proneness to itch. Finally, a microscopic examination of a few of the scales, to which a drop of liquor potassæ has been added, under a power of 350, will show the peculiar and characteristic fungus, which, it may be remarked, is different from both that of ringworm and that of favus.

The treatment of *tinea versicolor* is simple, and, if thoroughly carried out, quite efficacious. The best plan is to anoint the affected parts with *sapo viridis*, well rubbed in daily, for a week, avoiding the contact of water. After a pause of forty-eight hours a hot bath, with soap, is taken, and the disease, if mild and recent, will be found to have disappeared. If some remains, the same process may be repeated until a cure is effected. Another excellent application is sulphite of sodium, in the form of a lotion, one drachm to the ounce of water.

Whatever treatment is employed must be thoroughly applied. If a single patch is left untouched the whole disease may return. Two or three weeks usually suffice for a cure if the remedies have been well applied; but the patient should be inspected a little later, to see if the disease has begun to crop out again in some obscure point. Theoretically, as a parasitic disease, *T. versicolor* is contagious. I have never been able however to demonstrate the fact in practice.

Tooth Rash. (See *Eczema in Children*.)

Tubercle, Dissection. (See *Dissection Wound*.)

Tuberculosis of the Skin. (See *Scrofuloderma*.)

Tumors, Erectile. (See *Angioma*.)

Ulcer. Ulcers may proceed from various diseases, leading to necrosis of the skin, or from the effects of traumatism or pressure, or varicose veins. Ulcers proceeding from various diseases of the skin, have been touched upon under the heads of *epithelioma*, *lupus*, *syphilis*, etc. Varicose and similar ulcers require no special description in the present work.

Ulcer, Rodent. (See *Epithelioma*.)

Uridrosis is the name given to an excretion from the sweat glands, containing the elements of the urine, especially urea. It appears as a colorless or whitish, saline, crystalline deposit, or coating, looking as if flour had been sprinkled upon the surface. The deposit can be scraped off with a knife, and is seen, under the microscope, to present minute crystalline spiculæ. The disease is very rare. In most of the cases reported, partial or complete suppression of the renal function with disease of the kidneys and uræmic poisoning were present.

Urticaria is an inflammatory disease of the skin, characterized by the development of wheals of a whitish or reddish color, accompanied by sticking, pricking, tingling sensations. The lesions are apt to come out suddenly and disappear again in a very short time, so that a patient seeking advice is often unable to show a sign of the disease, excepting scratch marks, even at repeated visits to the physician, when he may have been tortured and disfigured by it between times. The wheals are of various sizes, sometimes as small as a split pea, sometimes as large as the palm of the hand. They average finger-nail size. While the smaller lesions are usually round, the larger ones may be very irregular, crescentic or linear; often they assume a grotesque outline. They may be barely elevated above the skin, or may rise to an eighth of an inch in height. They may be soft or firm to the touch, and whitish or pinkish in color. On the face the urticaria rash may cause great temporary deformity. The lip, or half the lip, for instance, may within a few minutes swell out to a great size, and remain thus for an hour or more. The eruption burns, stings and tingles, as if the skin had been stung by nettles, hence the popular English name of the disease, "nettle rash," while in this country it is popularly called "hives." Sometimes these sensations of burning and tingling are merely annoying; at other times they may prove distressing to the last degree. Rubbing and scratching commonly aggravate the disease, bringing out new wheals.

The lesions of urticaria frequently change their locality, the eruption appearing now in one part of the body, and again in

another. It occurs at all ages and in both sexes. Its duration depends entirely upon the presence or removal of the exciting cause. There are several varieties of urticaria:—1. *Urticaria papulosa*, described above. One form occurs among children, in widely dispersed, pin-head to split-pea-sized, flat or acuminate papules, which appear suddenly, and last for hours or days. It is attended by severe itching. 2. *Urticaria hæmorrhagica*, which is, in fact, urticaria occurring in the seat of a purpuric eruption, and is sometimes called “*purpura urticans*.” 3. *Urticaria bullosa*, where the wheals are transformed into blebs, which may assume some of the characteristics of pemphigus (see *Erythema multiforme*.) 4. *Urticaria tuberosa*, or “giant urticaria,” occurring in the form of large walnut or even egg-sized, firm, more or less persistent nodes or tumors, resembling somewhat exaggerated tumors of erythema nodosum.

Urticaria may be acute or chronic. The acute variety is usually, though not invariably, ushered in by slight febrile symptoms, languor, headache, depression, gastric disturbance, furred tongue, etc. The rash appears suddenly, and may involve the whole body, or a portion only, accompanied by intense, and almost intolerable, burning and stinging sensations. In a variable time, from one hour to a day, the symptoms subside and the eruption disappears, without leaving a trace, except in the form of scratch marks. Chronic urticaria may continue for months and years, or, indeed, as long as the cause exists. The individual lesions, which are usually small, come and go as in the acute form; crop after crop may appear, the skin being hardly ever free from them. The patient's general health may appear fair.

The causes of urticaria are numerous and of a very diverse character. Certain external irritants and poisons to the skin, as the stinging-nettle, jelly-fish, caterpillars, fleas, bed-bugs and mosquitoes, are not unfrequent causes. Among internal causes, gastric and intestinal derangements are by far the most common. An overloaded stomach, excess in wine, beer, or highly-seasoned food, may occasion an attack, while certain articles of food, as

fish, oysters, clams, crabs, lobsters, pork, especially sausage, oatmeal, mushrooms, raspberries and strawberries, are all apt to bring out the eruption. Various drugs have the same effect (see *Dermatitis medicamentosa*) in some individuals. In most cases of urticaria from these causes a certain idiosyncrasy seems to exist. Any irritation of the bowel, as by worms, in children, may bring out the eruption. Sudden emotion or mental excitement in certain persons may also produce it. In females menstrual and uterine difficulties may cause urticaria. The disease is intimately connected with the nervous system, and patients who suffer from chronic urticaria are apt to be persons of more or less depraved nervous organization.

The diagnosis of urticaria does not often present any difficulty, because the lesions are so peculiar in appearance, and because of the peculiar burning and tingling sensations. The small lesions, as found in children, may be mistaken for eczema, but a few scratches with the finger nail on the skin of any part of the body will arouse urticarial red or white bands and streaks, which show an irritable condition of the skin and are very characteristic.

The treatment of urticaria depends greatly, for its success, upon the discovery and removal of the cause. When this is suspected to be some gastric disturbance, the precise articles of food of which the patient has been partaking should be inquired into; their quality, as to freshness, etc., should also be a matter of scrutiny. The possibility of the patient having eaten anything unusual should also be considered, as well as the previous ingestion of medicine. An emetic may be given in acute cases, if the contents of the stomach have been recently ingested, and are suspected of being the cause. The bowels should be freely opened, if required, by a saline purgative. The diet should be of the most simple and unstimulating character, and the subsequent internal treatment should be directed against the digestive difficulty. The treatment in any given case must depend upon the result of a careful investigation into its nature and cause.

Among medicines the laxative mineral waters are often advantageous; Hunyadi Janos, Ofener Racoczy, Friedrichshall or

Hathorn; the latter preferably drunk at the spring in Saratoga. The alkaline waters, as Vichy or Saratoga Vichy, or sulphur waters, as the Richfield Springs water, with baths taken at the Springs, may also at times be used with advantage. Diuretics are often of use. Quinia is a most useful remedy, whether malaria be present or not. Arsenic is sometimes of service when other remedies fail. Iron also is useful. The "*Mistura ferri acida*," already several times referred to, is a very useful remedy in many cases of urticaria.

Bromide of potassium, chloral and other sedatives may be required, to give rest and calm to the nervous system, often injured by long-continued suffering. The preparations of opium should generally be avoided. Among other remedies, to be tried in difficult cases, may be mentioned the following: Sulphate of atropia, in doses of $\frac{1}{120}$ to $\frac{1}{60}$ grain, morning and evening; sulphurous acid, in drachm doses, diluted with simple syrup; salicylic acid, in 20-grain doses, thrice daily, and chloride of ammonium, in 10- to 20-grain doses, thrice daily. All of these I have been obliged to use at one time or another, and I have used each with satisfaction.

External treatment is of importance to calm the burning and tingling pain of the eruption, which is at times almost unendurable. Alkaline baths, followed by soothing powders, such as are described under the treatment of acute eczema, will be of use. Sponging with vinegar and water, or alcohol, alone or diluted, often gives relief; it should be practiced frequently. Carbolic acid, three drachms, with an ounce of glycerine in a pint of water, is an excellent wash though not so useful in the pruritus of urticaria as in that of other affections. Chloroform, a drachm to the ounce of alcohol, or a drachm to the ounce of cold cream, is very good. Dilute ammonia water is useful in some cases. Occasionally a saturated solution of benzoic acid in water is effectual. When one local remedy fails, another should be tried. Irritating underclothing should be avoided, and the patient should sleep in a cool room, with light bed covering.

The prognosis in urticaria varies in each case. If the cause is a temporary gastric derangement, its removal will soon result in a cure. If, however, the urticaria is chronic and dependent upon some derangement of the nervous, digestive or generative system of long standing, it is apt to prove very stubborn.

Vaccination, Skin Diseases Following. In addition to the inoculation of syphilis by vaccination, an event of such rare occurrence as not to require description in the present work, there are several skin affections which appear to arise as a result of a general irritation in predisposed constitutions, which are worthy of note. These assume the following forms: 1. *Erythema vaccinia* (already described under *Erythema*). 2. A *herpetiform* eruption, which shows itself in the form of a number of closely-grouped vesicles, appearing on the third day after vaccination, at the seat of the operation, surrounded by a red areola and itching severely. Sometimes eczema, with swelling of the axillary glands, results. It is apt to occur in weakly or anæmic children. 3. A *pemphigoid* eruption, when a bulla forms, instead of the usual vesicle, at the seat of inoculation. This may be followed by ulceration and cicatrization. It occasionally occurs as an epidemic. 4. A *furunculoid* eruption, in which red tubercles as large as peas appear at the seat of vaccination. These tubercles afterward suppurate. They correspond to ordinary follicular furuncles. 5. *Vaccinal erysipelas* sometimes makes its appearance, usually on the seventh to the tenth day after vaccination. It consists in the formation of a broad, red ring, which rapidly increases in extent. It is attended with swelling, tension and pain, and presents the usual characters of erysipelas. It sometimes spreads down the forearm, or even as far as the fingers, or up the arm to the axilla and chest. It is, of course, accompanied by general febrile and other symptoms. 6. *Vaccinal ulcers* sometimes occur, in place of the ordinary evolution of the vaccine vesicle. These are due to the setting up of a very intense morbid process in the skin of the part, rather than to any particular idiosyncrasy of the person vaccinated, or to any specific change in the blood. 7. *Gangrene* has

been known to occur in weakly children, the crusts being converted, on the twenty-fifth day after vaccination, into a black, fetid, gangrenous eschar. In one case reported, death ensued.

Vegetations. (See *Verruca* and *Syphilis*, skin diseases due to.)

Venereal Wart. (See *Verruca*.)

Vernix Caseosa. (See *Seborrhœa*.)

Verruca, or wart, presents itself in several different forms. In addition to the common wart, as met with on the hands and elsewhere, there is a flat variety, usually about the size of the finger nail, and only slightly elevated above the level of the skin. This is apt to be met with on the face and on the backs of the hands, and, from being found most frequently in elderly people, is called *verruca senilis*. Besides these forms of wart, there is the *verruca acuminata*, or pointed wart, consisting of one or more groups of acuminated or irregularly-shaped elevations, composed of greatly elongated papillæ of the skin, usually packed together so as to form a more or less solid mass of "vegetations." The individual prominences may be pointed, clubbed, or more or less sessile or pedunculated. In color, they are pinkish or reddish, bright red or purplish, depending on their situation and vascularity. They are apt to occur about the genitalia of both sexes. Upon the penis, they generally spring from the glans and inner surface of the prepuce. Upon the female, they generally spring from the inner surface of the labia and vagina. They are also found about the anus, mouth, axillæ, umbilicus and toes. About the genitalia their surface is usually moist, and they exhale a disgusting odor, due to the decomposition of the secretions on their surface. They grow rapidly, and may attain large size and assume grotesque and misshapen forms.

The causes of warts are obscure. The acuminated variety, as it occurs on the genitals, is often, but by no means always, venereal in origin, and may be due to the irritation of acrid discharges, as gonorrhœa. *It is never a manifestation of syphilis*, and the vegetating syphiloderm must not be confounded with

the growth under consideration. The wart is simply an hypertrophy of the papillæ, the connective tissue element being more prominent in the pointed variety, or condyloma.

Small warts may be clipped off with curved scissors, the base being touched with nitrate of silver stick. The dermal curette or scraping spoon may also be employed. The ligature, *écraseur* or galvano-caustic wire may be employed in the larger, vascular variety. Venereal warts about the labia are best treated by washing the parts with dilute liquor sodæ chlorinatæ, and afterwards dusting the surface with powdered calomel, resorcin, or a powder composed of equal parts of burnt alum and savin. Glacial acetic, nitric, chromic or carbolic acids may be used. The larger condylomata may be attacked by a Paquelin's cautery. Common warts may be cauterized by one of the acids mentioned, or by means of caustic potash, in stick or solution. Tincture of the chloride of iron is sometimes used successfully. The following prescription is in vogue at the present time. It answers excellently in many cases :—

R. Ext. cannabis indicæ, gr. x
 Acid salicylici, ʒss
 Collodii, ʒj. M.

Apply daily, for three or four days, and then scrape the wart, and if necessary apply again.

The salicylic rubber plaster of Johnson & Johnson is also an excellent application. It softens the wart, which can then be scraped off.

For patches of warts the following paste may be used, only not covering too much ground at a time, for fear of absorption :—

R. Pulv. acidi arseniosi, gr. vj
 Ung. hydrarg.,
 Empl. hydrarg., . . . aa, q. s., ad. ʒij. M.

The mixture should be made into a soft plaster, and applied on thin kid. The warts melt down gradually under its use.

Now and then warts resist all treatment, or spring up as fast as removed. In such cases arsenic may be given with some hope of preventing the recurrence of the growths. It should be ad-

ministered for months, as its action is only slowly felt in the economy. Occasionally the presence of warts seems due to some nervous or constitutional influence, and they stubbornly resist all treatment.

Verruca Necrogenica. (See *Dissection Wound*.)

Vitiligo shows itself in the form of one or more, usually sharply defined, rounded, ovalish or irregular-shaped, variously-sized and distributed, smooth, whitish spots, around the borders of which the surrounding skin shows an increase of pigment. The number of spots is usually not numerous; they are smooth and on a level with the surrounding skin, and save for the discoloration cannot be distinguished from it. The texture of the affected skin is indeed normal, except that the amount of pigment has diminished, a diminution which extends to the hairs growing on it, which usually turn white. The disease is popularly known as "piebald skin," and when occurring in the negro, has sometimes given rise to the notion that the skin was turning white, like that of a Caucasian. The disease is striking and disfiguring. It sometimes disappears spontaneously after years, but treatment has little effect. Arsenic is the only remedy which, in my experience, has had a good effect, when used for months. Treatment, however, on the whole, is unsatisfactory. The disease is sometimes mistaken for *Morphæa*, *Macular Leprosy* and *Chloasma*. A reference to the description of these diseases will show wherein they differ.

Wart. (See *Verruca*.)

Wen. (See *Sebaceous Cyst*.)

Xanthelasma. (See *Xanthoma*.)

Xanthoma is characterized by the formation of yellowish, pea-sized or larger, patches of various sizes, either flat with the skin or in tubercles and raised masses. The flat variety generally occurs on the eyelids, when the patches look like bits of chamois skin inserted in the lid. The tubercular form occurs usually elsewhere than on the eyelids. Hyde has figured in the second edition of his text-book a very remarkable case where the tubercles occurred about the knees. The lesions of both varie-

are usually single or few in number, but are now and then numerous. They rarely give rise to any sensation but occasionally pain slightly. They used to be thought connected in some way with disease of the liver, but such connection has never been proved. The treatment is excision. Lately, Wende, Buffalo, has succeeded in removing these tumors by electrolysis. (See *Electricity in Skin Disease*.)

Xeroderma. (See *Ichthyosis*.)

Xeroderma pigmentosum. (See *Angioma pigmentosum et trophicum*.)

Yaws. (See *Frambæsia*.)

Zoster—Zona. (See *Herpes zoster*.)

APPENDIX.

DIET IN DISEASES OF THE SKIN.

While there are many diseases of the skin which are purely local processes, or which are dependent upon general causes beyond the present ability of medical art to obviate, there are others, and among these some of the most important, as eczema, urticaria, acne, etc., in the management of which hygiene and dietetics play a most important part. Some allusion has been made to this point in treating of the various diseases in the foregoing pages, but it has seemed desirable to draw further attention to the subject in this place, and to give some general suggestions and hints which may be developed to suit the individual case.

And first, with reference to the part of the physician in giving counsel on this matter. The time spent in interrogating the patient with reference to his hours of meals, habits of eating, favorite foods and drinks, the effects of different articles of diet upon his digestion, so far as he may have observed himself in this matter, etc., is by no means lost. Having formed an opinion as to the condition of the digestive organs, so far as stomachal digestion is concerned, the inquiry should be pushed further, and the intestinal digestion and habits of defecation should be examined into. In many cases the simple knowledge of the existence of constipation or diarrhœa, or of the regular performance of defecation, is all that is necessary, but in some instances it may be desirable to push the inquiry further.

Having come to a conclusion as to the points at fault, full and explicit directions as to diet and regimen are to be given the patient, as a great deal depends upon the care and thoroughness with which the physician's advice is followed. The exact diet suitable to the individual must be decided upon and enforced

in such terms as to leave no doubt in the patient's mind as to the importance of every detail. Generalities in the way of directions, with a careless indication, in broad terms, of the articles of diet to be used and avoided, are not likely to produce a serious impression on the patient's mind, and the failure to amend is followed by a general despondency and distrust of all remedies.

It is obviously impossible, even if this were the place, to give a complete disquisition on diet in dyspepsia and weak digestion. Each case must be treated on its own merits. Inquiry should be made as to the particular articles of food which agree, so as to ascertain the form of dyspepsia which is present. I think it advisable, in many cases, to give the patient a list of such articles of diet as are commonly found upon our tables, marking such as are deemed suitable or unsuitable, and making such changes subsequently as the experience of the patient indicates. This list is arranged as follows:—

DIGESTIBLE FOODS.

Meats. Sweet bread, plainly cooked. Chicken and turkey (white meat). Venison. Partridge. Pheasant. Pigeon (squab). Wild duck. Rabbit. Lamb, roast, stewed or in broiled chops. Mutton, roast or in broiled chops. Beef, roast, or in rare tenderloin steak. Eggs, soft boiled. Tripe. Oysters, raw, roast, broiled or stewed (always rejecting the "eyes"). Fresh fish, especially trout, perch and flounders. Meat broths and clear soups, carefully made, not rich, and without vegetables.

Vegetables. Rice. Maccaroni. Spinach. Tomatoes (stewed). Peas (fresh and young). Beans (Lima, French and string, young and fresh). Squash. Carrots (young). Asparagus. Oyster Plant or Salsify (stewed). Mushrooms. Beets. Okras.

Bread, etc. Dry and milk toast. Zwieback (toasted rusk). Steamed crackers. Wheat bread, rather stale, and preferably the crust. Rolls. Graham bread.

Beverages. Cocoa, made from the nibs or shells. Weak Tea, with a slice of lemon instead of sugar and cream. Coffee, with

a raw, beaten egg instead of milk, sweetened with sugar or extract of malt. Milk in small quantities at a time. Apollinaris water.

QUESTIONABLE FOODS,

Such as are borne by some weak digestions, while disagreeing with others or at certain times.

Meats. Reed birds. Duck. Black meat of chicken or turkey. Omelette. Scrambled eggs.

Vegetables. Potatoes, white. Parsnips. Stewed Celery. Raw Celery. Hominy. Egg Plant. Water-cress. Onions. Foreign fruits, as Bananas, Oranges and Grapes. (The usual summer fruits, when perfectly fresh and in season, agree with almost every one.)

Bread, etc. Fresh wheat bread. Graham bread and biscuit, when hot and fresh. Oatmeal mush or porridge. Indian mush. Cracked wheat.

Puddings (boiled and baked), as custard, bread, farina, corn starch, tapioca, etc. Stewed fruits. Curds and cream. Plain cakes, as rusk, bun, etc. Ice cream.

Fluids. Coffee and Tea, strong, with sugar and cream. Chocolate, as usually prepared. Lemonade. Ginger ale, and the like.

INDIGESTIBLE FOODS,

Such as are commonly found to disagree with persons of weak digestion, or suffering from the various forms of dyspepsia.

Meats. Ham. Pork in any shape. Sausage. Corned beef. Dried beef. Veal. Goose. Kidneys. Liver.

Salt fish or smoked fish, as Cod, Mackerel, Salmon or Herring.

Shell fish, as Lobsters, Crabs, Clams, and the "eyes" of Oysters.

Hard-boiled eggs.

Vegetables. Cabbage. Sauer-kraut. Cauliflower. Lettuce and salads of all sorts. Cucumbers. Pickles. Corn. Raw celery. White potatoes (new). Sweet potatoes. Dried fruits, as Raisins, Figs, etc. Nuts. Water ices. Preserves.

Bread, etc. Hot bread, and especially hot griddle, and other

breakfast cakes. Fritters. Dumplings. Puddings of boiled flour. Pastry of all sorts and rich cakes. Cheese.

Fluids. Alcoholic and malt liquors of all kinds generally disagree with dyspeptics, and should not be taken except as prescribed. Syrups and gaseous beverages are also unwholesome.

In a general way salted and fried foods are to be avoided. Also too much fat; but butter, which is one of the most digestible fats, and which with most people adds a zest to restricted diet, should in almost all cases be permitted. Pickles, preserves, and candied or dried fruits, should be prohibited. Patients should be instructed (for this advice is often required) to eat slowly, chew carefully, and not to deluge the stomach with water or other fluids during meal time, especially at the beginning.

In cases of actual dyspepsia, considerable comfort is often gained by dividing the animal from the vegetable food, taking one at one meal, and the other at another. Vegetable food is much less likely to cause flatulence if taken alone.



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